636602

Report Number: 208S-TRC-03-003

Vehicle Safety Compliance Testing for FMVSS 208
for Occupant Crash Protection
Sled Test

Ford Motor Company
2003 Ford Crown Victoria
NHTSA Number: C30203
TRC Inc. Test Number: S030131

Transportation Research Center Inc.
10820 State Route 347
East Liberty, OH 43319

Test Date: January 31, 2003
Report Date: February 21, 2003

Final Report

Prepared For:
U. S. Department of Transportation
National Highway Traffic Safety Administration
Safety Assurance
Office of Vehicle Safety Compliance (NVS-220)
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Washington, DC 20590

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16. Abstract

An FMVSS 208 Section 13 compliance sled test was conducted on a 2003 Ford Crown Victoria 4-door, NHTSA No.C30203, in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP208S-01 for the determination of FMVSS 208 compliance. Possible test failures identified were as follows: None

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Purpose

This Federal Motor Vehicle safety Standard (FMVSS) 208 compliance sled test is part of the FMVSS compliance test program conducted for the National Highway Traffic Safety Administration (NHTSA) by the Transportation Research Center Inc. (TRC Inc.) under Contract No. DTNH22-98-D-01055. The purpose of this test was to determine if the subject vehicle, a 2003 Ford Crown Victoria 4-door, NHTSA No.C30203, meets the performance requirements of FMVSS 208, "Occupant Crash Protection," in the impact simulation sled test mode.

Test Procedure

This test was conducted in accordance with NHTSA's Office of Vehicle Safety Compliance (OVSC) Laboratory Test Procedure No. TP-208S-01, dated January 15, 1998. Data was obtained relative to FMVSS 208, "Occupant Crash Protection," performance.

The sled test vehicle was instrumented with six (6) accelerometers to measure longitudinal accelerations. The sled was instrumented with one (1) longitudinal accelerometer, which is prefiltered with an analog filter to 200 Hz as an integral part of the sled firing circuit, and two (2) additional accelerometers: the primary accelerometer for pulse and integrated velocity determination and a backup accelerometer. In addition, the sled was instrumented with one (1) light trap to measure velocity and four (4) airbag firing timing circuits.

The sled test vehicle contained two (2) Part 572 E 50th percentile adult male anthropomorphic test devices (dummies). The dummies were positioned in the front outboard designated seating positions according to the dummy placement procedure specified in Appendix B of the Laboratory Test Procedure. The dummies were not restrained by seat belts.

Both dummies were instrumented with head and chest accelerometers to measure longitudinal, lateral, and vertical accelerations; chest deflection potentiometers; left and right femur load cells to measure axial forces; and upper neck load cells to measure longitudinal, lateral, and vertical forces and moments.

The forty-one (41) data channels were digitally sampled at 12,500 samples per second and processed per Sections 11.7 through 11.9 of the Laboratory Test Procedure.

The sled test event was recorded by one (1) real-time motion picture camera and six (6) high-speed motion picture cameras. The pre-test and post-test conditions were recorded by one (1) real-time motion picture camera.

Test Results Summary

This FMVSS 208 compliance sled test was conducted by TRC Inc. on January 31, 2003.

The test vehicle, a 2003 Ford Crown Victoria 4-door, NHTSA No. C30203, does appear to comply with the performance requirements of FMVSS 208 in the impact simulation sled test mode as measured by Hybrid III 50th percentile male dummies.

	FMVSS 208 Max. Allowable Injury Assessment Values	Driver	Passenger
HIC	1000	226	275
Chest g	60 g	33.1	36.4
Chest Displacement	3 inches	1.4	0.5
Left Femur	2250 lbs.	1063	949
Right Femur	2250 lbs.	892	1004
Neck Extension	57 Nm	14.6	24.5
Neck Flexion	190 Nm	48.4	91.4
Neck Tension	3300 N	1010	274
Neck Compression	4000 N	3552	3389
Neck Shear	3100 N	1166	1449

The subject vehicle, a 2003 Ford Crown Victoria, NHTSA No. C30203, appears to meet the other FMVSS 208 requirements for which it was tested. These results are shown in the data sheets that are included in this report.

The sled test vehicle was equipped with air bags at the driver and passenger seating positions. The dummies were not restrained by seat belts. The sled carriage was accelerated to 17.7 g with an integrated velocity change of 29.7 mph. The primary stages of the airbags were triggered at 20.2 milliseconds after 0.5 g acceleration was measured by the firing circuit. The secondary stages of the airbags were triggered at 30.2 milliseconds after 0.5 g acceleration was measured by the firing circuit. Following subsequent digital data processing and filtering the acceleration signal to Channel Class 60, the primary stages airbag event trigger signal was 21.0 ms after the 0.5 g acceleration level was indicated and the secondary stages airbag event trigger signal was 31.0 ms after the 0.5 g acceleration level was indicated.

Data Acquisition Explanations

The engine top X-axis acceleration data channel recorded questionable data spikes at 44 milliseconds in the unfiltered data. Only the filtered data is shown in this report.

The sled velocity data channel recorded questionable data spikes at 225, 248, and 273 milliseconds.

Sled Test Summary

NHTSA number:	C30203
Test type:	FMVSS Alternate 208 Sled Test
Test date:	01/31/03
Test time:	11:30
Ambient temperature at impact area:	70.1° F
Vehicle year/make/ model/body style:	2003/Ford/Crown Victoria/4-door

Dummy Info:	Driver #230	Passenger #314
Type:	Hybrid III	Hybrid III
Location:	Left Front	Right Front
Restraint:	Airbag	Airbag
Number of data channels:		

Number of Cameras:	
Real-time:	2
High-speed:	6

Door Opening Data:	
Left Front:	Easy
Right Front:	Easy

Front Seat Data:		
Seat track failure:	None	None
Seat back failure	None	None

Visible Dummy Contact Points:		
Head:	Airbag, sunvisor, head restraint, windshield	Airbag, sunvisor
Chest:	Airbag	Airbag
Left knee:	Knee bolster	Glove box
Right knee:	Knee bolster	Glove box

General Test and Vehicle Parameter Data for the Sled Test Vehicle

Test Vehicle Information:

Vehicle year/make/ model/body style:	2003/Ford/Crown Victoria/4-door
Color:	Light Ice Blue
VIN:	2FAFP73W53X166007
NHTSA number:	C30203
Engine data:	
Placement:	Inline
Cylinders:	8
Displacement:	4.6 liters
Transmission data:	3 speed, ____manual, X automatic, X overdrive
Final drive:	___fwd, X rwd, ____4wd
Date vehicle received:	12/18/2002
Odometer reading:	110
Dealer's name and address:	Dutro Ford L/M Inc. Zanesville, Ohio 43701

Major Options:

Power steering	Yes
Power brakes	Yes
Power windows	Yes
Air conditioning	Yes
Power door locks	Yes
Other	None

Remarks:

General Test and Vehicle Parameter Data for the Sled Test Vehicle, Cont'd.

Data from Vehicle's Certification Label:

Vehicle manufactured by:		Ford Motor Company
Date of manufacture:		11/02
VIN:		2FAFP73W53X166007
GVWR:		5804 lbs.
GAWR:	Front:	2700 lbs.
	Rear:	3104 lbs.

Tire Data:

Tire pressure with maximum capacity vehicle load:	
Front:	35 psi
Rear:	35 psi
Recommended tire size:	P225/60R16T
Load range:	N/A lbs.
Recommended cold tire pressure:	
Front:	32 psi
Rear:	35 psi
Size of tires on vehicle:	P225/60R16
Spare tire:	T145/80D16
Vehicle capacity data:	
Type of front seats:	50/50 Split bench
Number of occupants:	
Front	3
Rear	3
Total	6

Remarks:

General Test and Vehicle Parameter Data for the Sled Test Vehicle, Cont'd.

Weight of test vehicle as received (with maximum fluids):

Right front	1168.4	lbs.	Right rear	885.1	lbs.
Left front	1140.9	lbs.	Left rear	897.3	lbs.
Total front weight	2309.3	lbs.	(56.4% of total vehicle weight)		
Total rear weight	1782.4	lbs.	(43.6% of total vehicle weight)		
Total delivered weight	4091.7	lbs.			

Calculation of test vehicle's target test weight:

RCLW = Rated Cargo and Luggage Weight

UDW = Unloaded Delivered Weight (4091.7 lbs.)

DSC = Designated Seating Capacity (6)

RCLW = 200 lbs.

Target test weight = UDW + RCLW + (Number of Hybrid III dummies x 167 lbs. per dummy)

Target test weight = 4091.7 + 200 + 334 = 4625.7 lbs.

Weight of test vehicle with two dummies and 201.8 lbs. of cargo weight:

Right front	1235.7	lbs.	Right rear	1082.5	lbs.
Left front	1205.9	lbs.	Left rear	1103.4	lbs.
Total front weight	2441.6	lbs.	(52.8% of total vehicle weight)		
Total rear weight	2185.9	lbs.	(47.2% of total vehicle weight)		
Total test weight	4627.5	lbs.			

Remarks:

Weight of ballast secured in vehicle cargo area: None

Components removed to meet target test weight: None

General Test and Vehicle Parameter Data for the Sled Test Vehicle. Cont'd.

Test Vehicle Attitude:

As delivered door sill angle:	1.0° Nose down
As tested door sill angle:	0.9° Nose down
Fully loaded door sill angle:	0.4° Nose down
Vehicle Wheelbase:	N/A

Fuel System Data:

Fuel system capacity from owner's manual:	19.0 gallons
Useable capacity figure furnished by COTR:	19.0 gallons

Remarks: The roll angle measurements were within 1 inch of each other.

The left and right side measurements were 34.1 inches and 34.0 inches, respectively.

Post-Impact Data

Test number:	S030131
NHTSA number:	C30203
Test date:	01/31/03
Test time:	11:30
Test type:	FMVSS Alternate 208 Sled Test
Impact angle:	0°
Ambient temperature at impact area:	70.1° F
Temperature in occupant compartment:	70.1° F

Sled carriage velocity:

Integrated velocity from the integration of the entire sled acceleration:	29.7 mph
Measured velocity from the light trap device attached to the sled (backup):	29.3 mph
Specified integrated velocity range:	28 to 30 mph

Sled carriage acceleration:

Acceleration:	17.7 g
Specified acceleration range:	16.0 g - 18.2 g

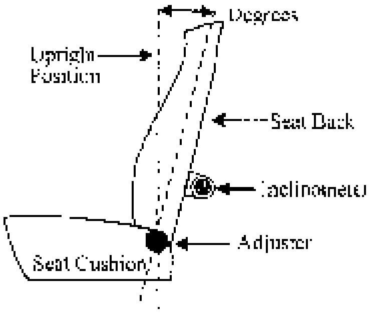
Sled carriage acceleration duration:

Time from T-0(-0.5 g) to 0.0 g:	124.1 ms
Specified acceleration duration:	120 - 130 ms

The sled acceleration curve was within the specified corridor.

Seat and Steering Column Positioning Data

Vehicle: 2003/Ford/Crown Victoria/4-door NHTSA No.: C30203



Front Seat Assembly
Left Side View

Nominal Design Riding Position:

Driver Seat: Seat Back Angle = 29.4° Power adjustable Seat back angle was measured on the seat back rear outboard frame 13 inches above the back pivot point.

Passenger Seat: Seat Back Angle = 29.3° Manual adjustable Seat back angle was measured on the seat back rear outboard frame 13 inches above the back pivot point.

Seat Fore and Aft Positions:

Driver Seat: Mid Seats were marked by measuring the mid point of the power seat track fore-aft travel.

Passenger: Mid Seats were marked by marking each manual seat track position.

Steering Column Adjustments:

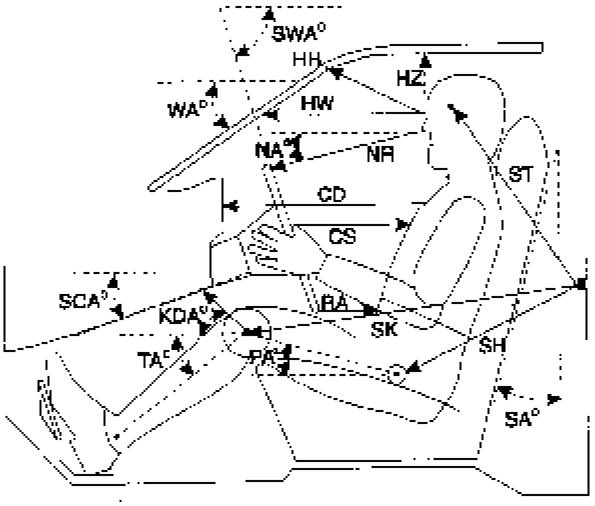
The steering column was placed in the third (mid) position of five adjustment positions.

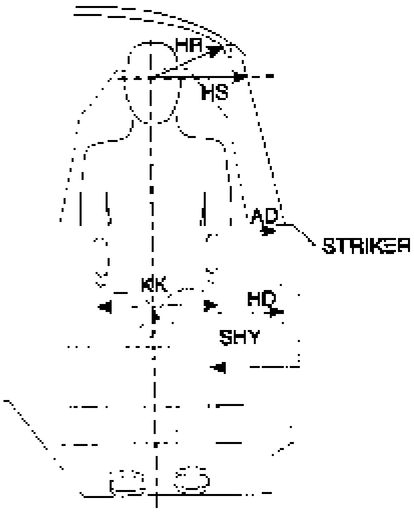
Dummy Measurement Data for Front Seat Occupants

Designation	Type of Measurement	Driver (Serial #230)	Passenger (Serial #314)
WA	Windshield angle	32.5°	N/A
SWA	Steering wheel angle	24.7°	N/A
SCA	Steering column angle	65.3°	N/A
SA	Seat back angle	29.4°	29.3°
HZ	Head to roof	8.2 in	7.7 in
HH	Head to header	14.7 in	14.3 in
HW	Head to windshield	23.3 in	21.4 in
HR	Head to side header	8.9 in	8.5 in
NR	Nose to rim	15.8 in	N/A
NA	Nose to rim angle	9.4°	N/A
CD	Chest to dash	21.6 in	20.2 in
CS	Steering wheel to chest	11.1 in	N/A
RA	Rim to abdomen	7.1 in	N/A
KDL	Left knee to dash	5.9 in	5.1 in
KDR	Right knee to dash	5.7 in	5.1 in
KDA	Outboard knee to dash angle	27.4°	26.1°
PA	Pelvis angle	23.0°	23.6°
TA	Tibia angle	38.2°	37.7°
KK	Knee to knee	12.6 in	10.6 in
ST[1]	Striker to head	19.4 in	19.5 in
	Striker to head angle	-84.0°	-84.7°
SK[1]	Striker to knee	21.5 in	22.8 in
	Striker to knee angle	-1.5°	-2.0°
SH[1]	Striker to H-point	9.1 in	8.8 in
	Striker to H-point angle	32.2°	25.9°
SHY	Striker to H-point (Y dir.)	12.1 in	11.1 in
HS	Head to side window	12.9 in	13.0 in
HD	H-point to door	8.6 in	8.1 in
AD	Arm to door	5.6 in	5.4 in

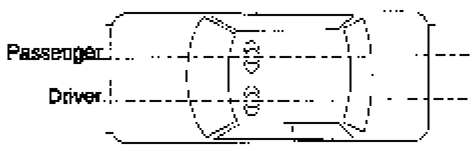
The seat back angle (SA°) is measured relative to vertical.
All other angles are measured relative to horizontal.
[1] A negative angle indicates the measurement point was located below the striker.

Dummy Measurement Locations for Front Seat Occupants

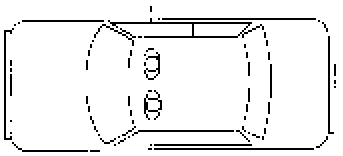




VERTICAL LONGITUDINAL PLANE



VERTICAL TRANSVERSE PLANE



Descriptions of Dummy Measurements

When a level is to be used, it is to ensure that the line containing the two points described is either parallel or perpendicular to the ground. If a measurement to be made is less than 10 inches ignore the directions to use a level and approximate a level measurement. Also, when a measurement is to be taken to or from the center of a bolt on the dummy, take the measurement from the center of the bolt hole if the bolt is recessed.

The following measurements are to be made within a vertical longitudinal plane.

*	HH	Head to Header, taken from the point where the dummy's nose meets his forehead (between his eyes) to the furthest point forward on the header.
*	HW	Head to Windshield, taken from the point where the dummy's nose meets his forehead (between his eyes) to a point on the windshield. Use a level.
	HZ	Head to Roof, taken from the point where the dummy's nose meets his forehead (between his eyes) to the point on the roof directly above it. Use a level.
*	CS	Steering Wheel to Chest, taken from the center of the steering wheel hub to the dummy's chest. Use a level.
*	CD	Chest to Dash, place a tape measure on the tip of the dummy's chin and rotate five inches of it downward toward the dummy to the point of contact on the transverse center of the dummy's chest. Then measure from this point to the closest point on the dashboard either between the upper part of the steering wheel between the hub and the rim, or measure to the dashboard placing the tape measure above the rim, whichever is a shorter measurement. See diagram.
	RA	Steering Wheel Rim to Abdomen, taken from the bottommost point of the steering wheel rim horizontally rearward to the dummy. Use a level.
	NR	Nose to Rim, taken from the tip of the dummy's nose to the closest point on the top of the steering wheel rim. Also indicate the angle this line makes with respect to the horizontal (NA).

* Measurement used in Data Tape Reference Guide

Descriptions of Dummy Measurements, Cont'd.

*[1] KDL,
KDR Left and Right Knees to Dashboard, taken from the center of the knee pivot bolt's outer surface to the closest point forward acquired by swinging the tape measure in continually larger arcs until it contacts the dashboard. Also reference the angle of this measurement with respect to the horizontal for the outboard knee (KDA). See diagram.

SH,
SK,
ST Striker to Hip, Knee, and Head, these measurements are to be taken in the X-Z plane measured from the forward most center point on the striker to the center of the H-point, outer knee bolt, and head target. When taking this measurement a firm device that can be rigidly connected to the striker should be used. Use a level. The angles of these measurements with respect to the horizontal should also be recorded. The measurement in the Y (transverse) direction from the striker to the H-point should also be taken (SHY). See diagram.

The following measurements are to be made within a vertical transverse plane.

HS Head to Side Window, taken from the point where the dummy's nose meets his forehead (between his eyes) to the outside of the side window. In order to make this measurement, roll the window down to the exact height which allows a level measurement. Use a level. See diagram.

* AD Arm to Door, taken from the outer surface of the elbow pivot bolt on a Hybrid II dummy to the first point it hits on the door. In the case of a Hybrid III dummy, measure from the bolt on the outer biceps. When a SID is used make the measurement from the center of the bottom of the arm segment where it meets the dummy's torso.

* HD H-point to Door, taken from the H-point on the dummy to the closest point on the door. Use a level.

* HR Head to Side Header, measure the shortest distance from the point where the dummy's nose meets his forehead (between his eyes) to the side edge of the header just above the window frame, directly adjacent to the dummy.

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* Measurement used in Data Tape Reference Guide

[1] Only outboard measurement is referenced in Data Tape Reference Guide

Descriptions of Dummy Measurements, Cont'd.

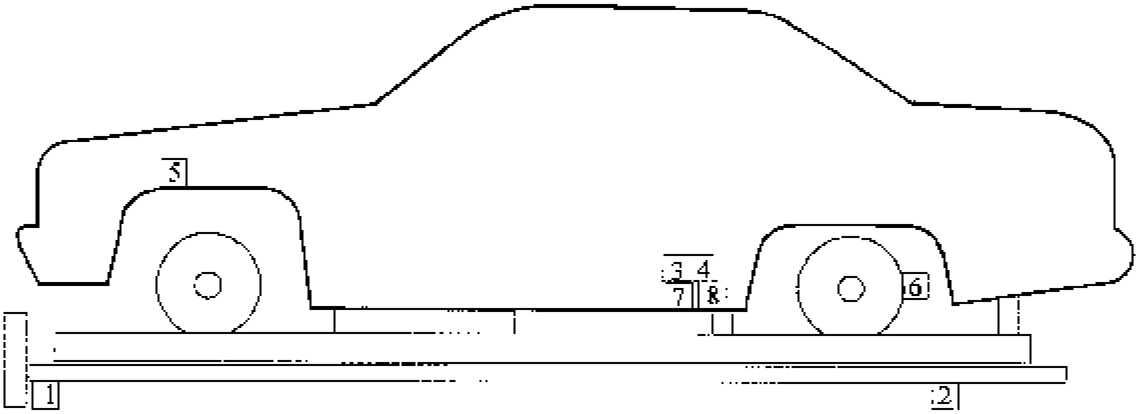
SHY	Striker to H-point, taken from a rod rigidly connected to the forward most center point on the striker to the H-point. Use a level. See diagram.
KK	Knee to Knee, for Hybrid II dummies measure the distance between knee pivot bolt head outer surfaces. For Hybrid III dummies measure the distance between the outboard knee clevis flange surfaces. (This measurement may not be exactly transverse.)

Angles

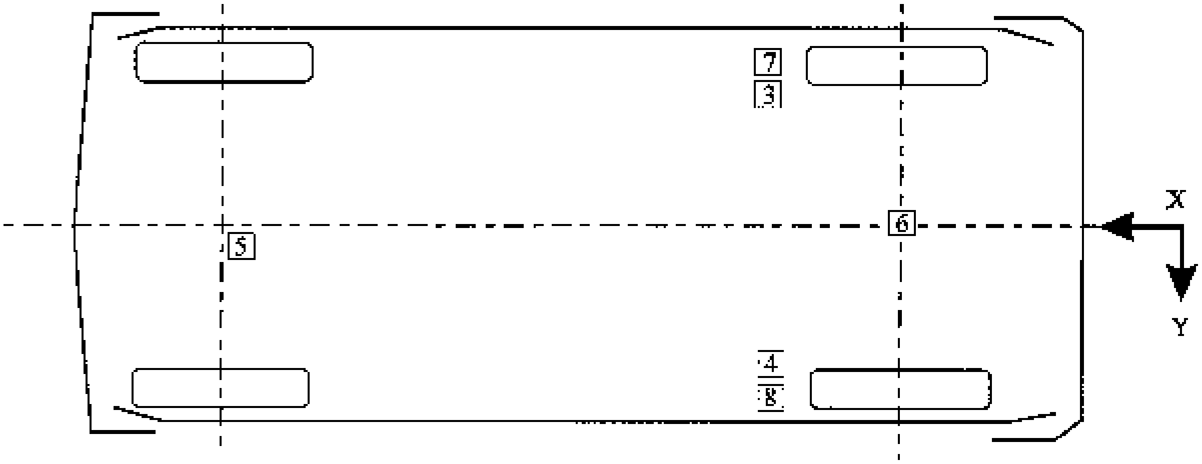
SA	Seat Back Angle, find this angle using the instructions provided by the manufacturer. If the manufacturer doesn't provide clear instructions contact the COTR.
PA	Pelvis or Femur Angle, taken by inserting the pelvic angle gauge into the H-point gauging hole on the SID or the Hybrid III dummies and taking this angle with respect to the horizontal. Measure the angle of the line connecting the H-point hole and the outer knee pivot bolt hole on a Hybrid II dummy with respect to the horizontal, to find the femur angle.
SWA	Steering Wheel Angle, find this by placing a straight edge against the steering wheel rim along the longitudinal plane. Then measure the acute angle of the straight edge with respect to the horizontal.
SCA	Steering Column Angle, measured with respect to the horizontal by placing an inclinometer on the center of the underside of the steering column.
NA	Measure the angle made when taking the measurement NR with respect to the horizontal.
KDA	Knee to Dash Angle, the angle that the measurement KD is taken at with respect to the horizontal. Only get this angle for the outboard knee. See diagram.
WA	Windshield Angle, place an inclinometer along the transverse center of the windshield exterior (measurement is made with respect to horizontal).
TA	Tibia Angle, use a straight edge to connect the dummy's knee and ankle bolts. Then place an inclinometer on the straight edge and measure the angle with respect to the horizontal.

* Measurement used in Data Tape Reference Guide

Vehicle Accelerometer Placement



Side View



Bottom View

Vehicle Data Summary and Accelerometer Locations

TEST NUMBER: S030131

No. LOCATION	X	Y	Z	POSITIVE DIRECTION [1]		NEGATIVE DIRECTION [1]	
1 SLED ACCELERATION PRIMARY	165.6 in	-1.0 in	NA	0.5 g	@ 214.0 ms	17.7 g	@ 55.2 ms
2 SLED ACCELERATION BACKUP REDUNDANT	165.6 in	-1.0 in	NA	0.5 g	@ 215.3 ms	17.8 g	@ 55.2 ms
3 SLED VELOCITY MEASURED	NA	NA	NA	0.1 mph	@ 8.0 ms	29.3 mph	@ 133.8 ms
INTEGRATED [2]				---	---	29.7 mph	@ 136.5 ms
4 LEFT BODY AT REAR SEAT LONGITUDINAL	84.0 in	28.3 in	NA	1.0 g	@ 127.0 ms	17.9 g	@ 51.3 ms
5 RIGHT BODY AT REAR SEAT LONGITUDINAL	83.8 in	-28.3 in	NA	0.8 g	@ 127.8 ms	17.7 g	@ 56.4 ms
6 TOP ENGINE LONGITUDINAL [3]	165.1 in	0.8 in	NA	3.4 g	@ 130.8 ms	18.6 g	@ 55.8 ms
7 REAR AXLE LONGITUDINAL	53.7 in	0.2 in	NA	1.3 g	@ 129.3 ms	18.2 g	@ 55.4 ms
8 LEFT VEHICLE FRAME LONGITUDINAL	57.2 in	24.1 in	NA	1.7 g	@ 129.8 ms	18.3 g	@ 59.8 ms

Vehicle Data Summary and Accelerometer Locations, Cont'd.

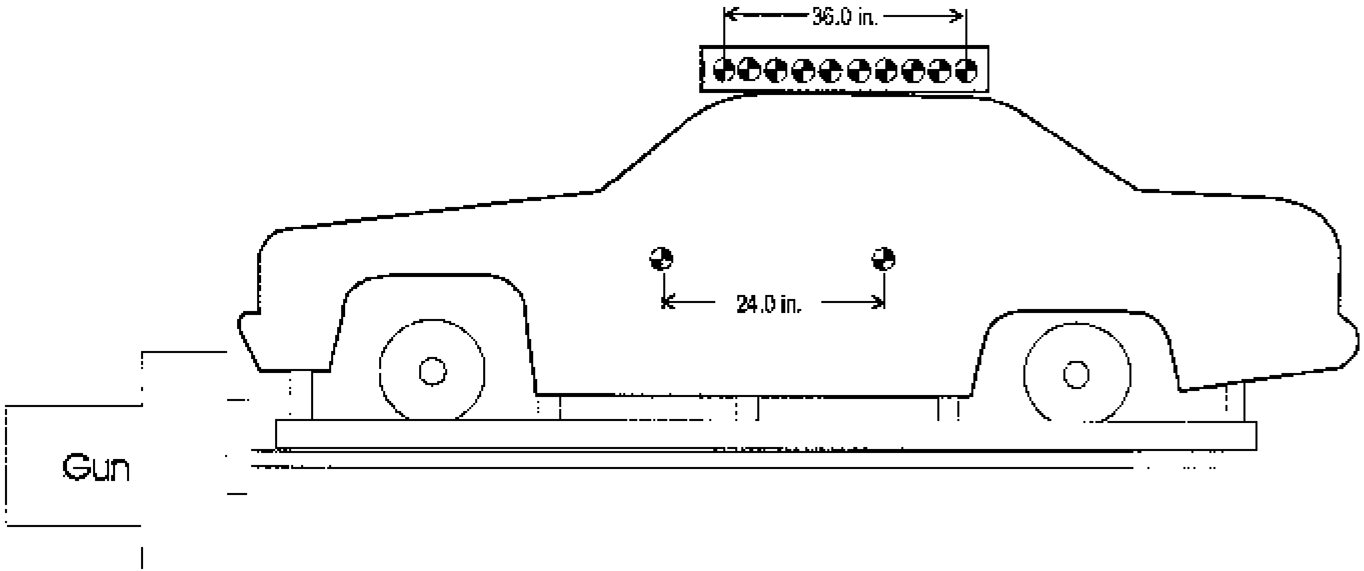
TEST NUMBER: S030131

No. LOCATION	X	Y	Z	POSITIVE DIRECTION [1]	NEGATIVE DIRECTION [1]
9 RIGHT VEHICLE FRAME LONGITUDINAL	58.1 in	-24.1 in	NA	1.5 g @ 128.7 ms	18.1 g @ 60.4 ms
10 DRIVER PRIMARY AIRBAG EVENT	NA	NA	NA	1.0 volt @ 21.0 ms	--- ---
11 DRIVER SECONDARY AIRBAG EVENT	NA	NA	NA	1.0 volt @ 31.0 ms	--- ---
12 PASSENGER PRIMARY AIRBAG EVENT	NA	NA	NA	1.0 volt @ 21.0 ms	--- ---
13 PASSENGER SECONDARY AIRBAG EVENT	NA	NA	NA	1.0 volt @ 31.0 ms	--- ---

REFERENCE: X: + FORWARD FROM VEHICLE REAR SURFACE
Y: + RIGHTWARD FROM SLED CARRIAGE CENTERLINE

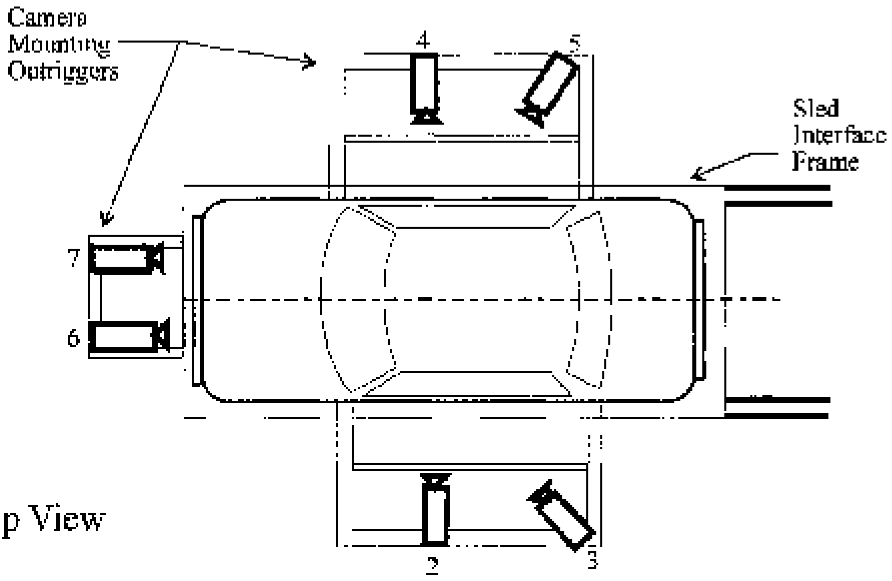
[1] Sign convention per SAEJ211 March 1995.
[2] No positive data in time frame of interest.
[3] See Data Acquisition Explanations

REFERENCE PHOTO TARGETS



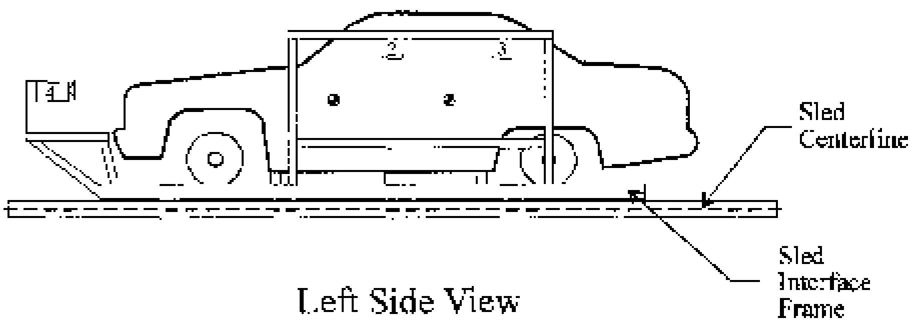
LEFT SIDE VIEW

Camera Positions



Top View

Camera Frame Rates:
#1 = 24 fps
All Others = 1,000 fps



Left Side View

Motion Picture Camera Locations

Vehicle year/make/model/body style: 2003/Ford/Crown Victoria/4-door NHTSA No.: C30203 Test Number: S030131

Camera Number	View	Camera Positions[1] X	Y	Z	Camera Angle[2]	Film Plane to Head Target	Camera Lens	Film Speed
1	Left side view offboard	89.1 in	311.8 in	43.9 in	0.0°	314.0 in	zoom	24. frames/s
2	Left side view wide	69.8 in	73.0 in	52.1 in	0.0°	55.9 in	8 mm	997 frames/s
3	Left side view over shoulder	97.3 in	50.0 in	60.2 in	-14.5°	37.1 in	8 mm	1010 frames/s
4	Right side view wide	71.9 in	74.0 in	51.3 in	-4.2°	56.3 in	8 mm	1020 frames/s
5	Right side view over shoulder	99.9 in	79.8 in	58.9 in	-11.2°	37.2 in	8 mm	895 frames/s
6	Front view - driver	28.4 in	14.4 in	56.2 in	-3.9°	54.9 in	8 mm	1000 frames/s
7	Front view - passenger	27.7 in	17.5 in	56.3 in	-3.8°	55.6 in	8 mm	995 frames/s

[1] X: Film plane to front of sled
Y: Film plane to sled centerline
Z: Film plane to top of sled

[2] Angle: Film plane of camera upward from horizontal plane

FMVSS 208 Occupant Injury Data

Vehicle: 2003/Ford/Crown Victoria/4-door NHTSA No.: C30203 Date:01/31/03

Maximum Acceleration Values: (g)	Driver Dummy #230	Passenger Dummy #314
Head Channel X	-57.4	-64.9
Head Channel Y	-7.6	-24.1
Head Channel Z	30.4	39.4
HEAD RESULTANT	59.8	73.2
Chest Channel X	-30.4	-31.4
Chest Channel Y	2.5	-5.0
Chest Channel Z	18.8	24.4
CHEST RESULTANT	34.0	37.9

Head Injury Criteria (HIC) Values:

HIC	226	275
t_1 = (ms)	84.88	103.52
t_2 = (ms)	120.88	113.68

The maximum HIC time interval from t_1 to t_2 is 36 milliseconds.

Chest Injury Criteria (Clip) Values:

CLIP (g)	33.1	36.4
t_1 = (ms)	108.58	104.16
t_2 = (ms)	111.54	107.12
Chest Deflection (in)	1.4	0.5

FMVSS 208 Occupant Injury Data. Cont'd.

Vehicle: 2003/Ford/Crown Victoria/4-door NHTSA No.: C30203 Date:01/31/03

Max. Compressive Femur Forces:	Driver Dummy #230	Passenger Dummy #314
Left Side (lbs.)	1063	949
Right Side (lbs.)	892	1004

Neck Injury Criteria:	Driver Dummy #230	Passenger Dummy #314
Peak Flexion Bending Moment (N-m)	48.4	91.4
Peak Extension Bending Moment (N-m)	14.6	24.5
Peak Axial Tension (N)	1010	274
Peak Axial Compression (N)	3552	3389
Peak Positive X-axis Shear (N)	1166	1449
Peak Negative X-axis Shear (N)	164	276

FMVSS 208 Seat Belt Warning System Check

Vehicle Model Year/Make/Model/Body Style: 2003/Ford/Crown Victoria/4-door

NHTSA No.: C30203 Technician: Steve Bell Date: 01/17/2003

Complete the following to determine which seat belt warning system option (S7.3(a)(1) or S7.3(a)(2)) is used. (Manufacturers may use either option.)

A. With occupant in driver's position and lap belt in stowed position and ignition switch placed in "Start/On" position:

A.1 S7.3(a)(1)

Time duration of audible warning signal = 6 seconds
(4 to 8 seconds)

Time duration of reminder light operation = 62 seconds
(no less than 60 seconds)

A.2 S7.3(a)(2)

Time duration of audible warning signal = seconds
(4 to 8 seconds) (see 49 USCS @ 30124)

Time duration of reminder light operation = seconds
(4 to 8 seconds)

B. With occupant in driver's position and lap belt in use and the ignition switch placed in "Start/On" position:

B.1 S7.3(a)(1)

Time duration of audible warning signal = 0 seconds
(audible warning should not operate)

Time duration of reminder light operation = 0 seconds
(reminder light does not operate)

B.2 S7.3(a)(2)

Time duration of audible warning signal = seconds
(audible warning should not operate)

Time duration of reminder light operation = seconds
(4 to 8 seconds)

C. Note wording of visual warning:

Fasten Seat Belt

Fasten Belt

Symbol 101 ☒

FMVSS 208 Readiness Indicator

Vehicle Model Year/Make/Model/Body Style: 2003/Ford/Crown Victoria/4-door

NHTSA No.: C30203 Technician: Steve Bell Date: 01/17/2003

An occupant restraint system that deploys in the event of a crash shall have a monitoring system with a readiness indicator. A totally mechanical system is exempt from this requirement (11/8/94 legal interpretation).

Is the system totally mechanical? ☐ Yes; ☒ No

Describe the location of the readiness indicator: Upper left corner of instrument panel

Is the readiness indicator clearly visible to the driver? ☒ Yes; ☐ No

Is a list of the elements in the occupant restraint system, being monitored by the readiness indicator, provided? ☒ Yes; ☐ No

FMVSS 208 Air Bag Labels

Vehicle Model Year/Make/Model/Body Style: 2003/Ford/Crown Victoria/4-door

NHTSA No.: C30203 Technician: Steve Bell Date: 01/17/2003

1. Air Bag Maintenance Label and Owner's Manual Instructions:

1.1 Does the manufacturer recommend periodic maintenance or replacement of the air bag? ☐ Yes (Go to 1.2) ☒ No (Go to 2)

1.2 Does the Vehicle have a maintenance or replacement label? ☐ Yes-Pass ☐ **No-Fail**

1.3 Does the label contain one of the following? ☐ Yes-Pass ☐ **No-Fail**

☐ Schedule on label specifies month and year

☐ Schedule on label specifies vehicle mileage

☐ Schedule on label specifies interval measured from date on certification label

1.4 Is the label permanently affixed within the passenger compartment? ☐ Yes-Pass ☐ **No-Fail**

1.5 Is the label lettered in English? ☐ Yes-Pass ☐ **No-Fail**

1.6 Is the label in block capitals and numerals? ☐ Yes-Pass ☐ **No-Fail**

1.7 Are the letters and numerals at least 3/32 inch high? ☐ Yes-Pass ☐ **No-Fail**

1.8 Does the owner's manual set forth the recommended schedule for maintenance or replacement? ☐ Yes-Pass ☐ **No-Fail**

2. Does the owner's manual: (S4.5.1 (f))

2.1 Include a description of the vehicle's air bag system in an easily understandable format? ☒ Yes ☐ **No-Fail**

2.2 Include a statement that the vehicle is equipped with an air bag and a lap/shoulder belt at the front outboard seating positions? ☒ Yes ☐ **No-Fail**

FMVSS 208 Air Bag Labels, Cont'd.

2.3 Include a statement that the air bag is a supplemental restraint at the front outboard seating positions? ☒ Yes ☐ **No-Fail**

2.4 Emphasize that all occupants, including the driver, should always wear their seat belts whether or not an air bag is also provided at their seating positions to minimize the risk of severe injury or death in the event of a crash?

☒ Yes ☐ **No-Fail**

2.5 Provide any necessary precautions regarding the proper positioning of occupants, including children, at seating positions equipped with air bags to insure maximum safety protection for those occupants? ☒ Yes ☐ **No-Fail**

2.6 Explain that no objects should be place over or near the air bag on the steering wheel or on the instrument panel, because any such objects could cause harm if the vehicle is in a crash severe enough to cause the air bag to inflate?

☒ Yes ☐ **No-Fail**

3. Does the Vehicle:

3.1 Provide an automatic means to ensure that the air bag does not deploy when a child seat or child with a total mass of 30 kg or less is present on the front outboard seat? ☐ Yes ☒ No

3.2 Incorporate sensors, other than or in addition to weight sensors, which automatically prevent the passenger air bag from deploying in situations in which it might have an adverse effect on infants in rear-facing child seat, and unbelted or improperly belted children? ☐ Yes ☒ No

3.3 Have a passenger air bag designed to deploy in a manner that does not create a risk of serious injury to infants in rear-facing child seats, and unbelted or improperly belted children? ☐ Yes ☒ No

If yes to 3.1, or 3.2, or 3.3, the vehicle is not required to have a Sun Visor Warning Label (S4.5.1(b)), an air bag alert label (S4.5.1(c)) or a label on the dash (S4.5.1(e)) and **this check sheet is complete. (S4.5.1) If no to 3.1, 3.2, and 3.3, go to 4.**

4. Sun Visor Warning Label

4.1 Is the label permanently affixed (may be permanent marking or molding) to either side of the sun visor at each front outboard seating position with an air bag?

Driver side ☒ Yes-Pass ☐ **No-Fail**

Passenger side ☒ Yes-Pass ☐ **No-Fail**

4.2 Does the label conform in content **(vehicles without back seats may omit the statement: "The BACK SEAT is the SAFEST place for children.")** (S4.5.1(b)(2)(v)) to the label shown in either Figure 6a or 6b as appropriate at each front outboard seating position with an air bag? (S4.5.1(b)(2))

4.2.1 Dual air bags

Driver side ☒ Yes-Pass ☐ **No-Fail**

Passenger side ☒ Yes-Pass ☐ **No-Fail**

4.2.2 Vehicles with driver air bag ONLY - either 4.2.1 or 4.2.2 is applicable, not both. (S4.5.1(b)(2)(iv))

4.2.2.1 Does the label conform on content to the label shown in either Figure 6a or 6b as appropriate?

☒ N/A

Driver side ☐ Yes-Pass ☐ **No-Fail**

4.2.2.2 Does the label conform in content to the label shown in Figure 6a where the label can be modified to omit the pictogram and the message may read:

DEATH or SERIOUS INJURY can occur.

. Sit as far back as possible from the air bag.

. ALWAYS use SEAT BELTS and CHILD RESTRAINTS.

. The BACK SEAT is the SAFEST place for children.

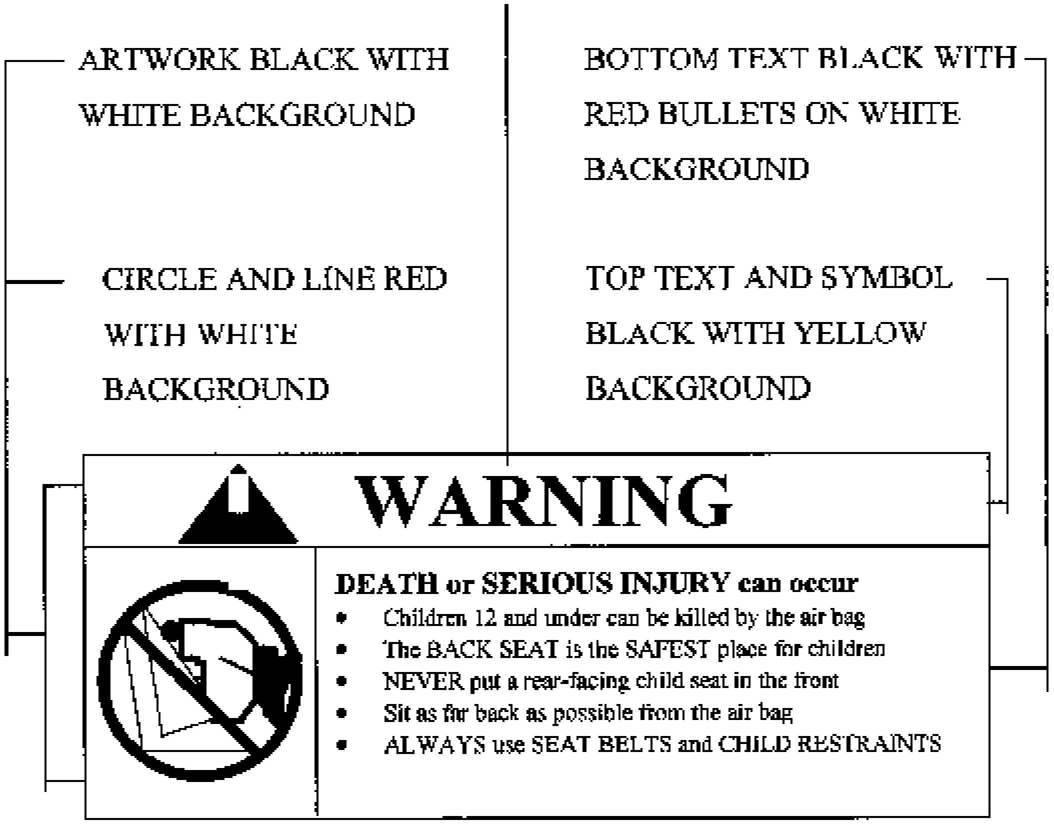
☒ N/A

Driver side ☐ Yes-Pass ☐ **No-Fail**

FMVSS 208 Air Bag Labels. Cont'd.

SUN VISOR LABEL VISIBLE WHEN VISOR IS IN DOWN POSITION

LABEL OUTLINE, VERTICAL AND HORIZONTAL LINE BLACK


ARTWORK BLACK WITH WHITE BACKGROUND
CIRCLE AND LINE RED WITH WHITE BACKGROUND
BOTTOM TEXT BLACK WITH RED BULLETS ON WHITE BACKGROUND
TOP TEXT AND SYMBOL BLACK WITH YELLOW BACKGROUND

WARNING

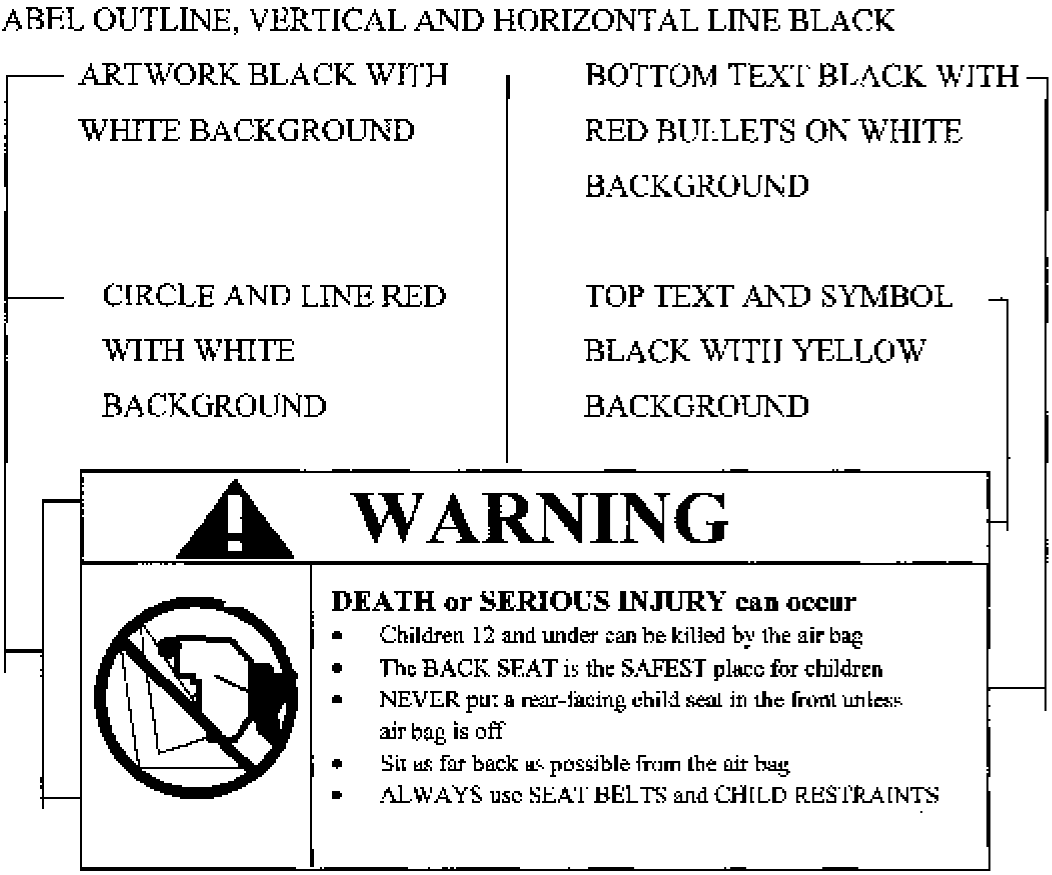
DEATH or SERIOUS INJURY can occur

- Children 12 and under can be killed by the air bag
- The BACK SEAT is the SAFEST place for children
- NEVER put a rear-facing child seat in the front
- Sit as far back as possible from the air bag
- ALWAYS use SEAT BELTS and CHILD RESTRAINTS

Figure 6a
(S4.5.1(b)(2))

FMVSS 208 Air Bag Labels, Cont'd.

SUN VISOR LABEL VISIBLE WHEN VISOR IS IN DOWN POSITION


LABEL OUTLINE, VERTICAL AND HORIZONTAL LINE BLACK
ARTWORK BLACK WITH WHITE BACKGROUND
BOTTOM TEXT BLACK WITH RED BULLETS ON WHITE BACKGROUND
CIRCLE AND LINE RED WITH WHITE BACKGROUND
TOP TEXT AND SYMBOL BLACK WITH YELLOW BACKGROUND

WARNING

DEATH or SERIOUS INJURY can occur

- Children 12 and under can be killed by the air bag
- The BACK SEAT is the SAFEST place for children
- NEVER put a rear-facing child seat in the front unless air bag is off
- Sit as far back as possible from the air bag
- ALWAYS use SEAT BELTS and CHILD RESTRAINTS

Figure 6b
(S4.5.1(b)(2))

4.3 Is the driver side label heading area yellow with the word "warning" and the alert symbol in black? (S4.5.1.(b)(2)(i))

Driver side ☒ Yes-Pass ☐ **No-Fail**

Passenger side ☒ Yes-Pass ☐ **No-Fail**

4.4 Is the message white with black text? (S4.5.1 (b)(2)(ii))

Driver side ☒ Yes-Pass ☐ **No-Fail**

Passenger side ☐ No air bag ☒ Yes-Pass ☐ **No-Fail**

4.5 Is the message area at least 30 cm^2? (S4.5.1(b)(2)(ii))

Actual message area, driver side **30** cm^2

Actual message area, passenger side **30** cm^2

Driver side ☒ Yes-Pass ☐ **No-Fail**

Passenger side ☐ No air bag ☒ Yes-Pass ☐ **No-Fail**

FMVSS 208 Air Bag Labels, Cont'd.

4.6 Is the pictogram black with a red circle and slash on a white background? (S4.5.1(b)(2)(iii)) & (S4.5.1(b)(2)(iv))

For vehicles with driver side air bag ONLY ☐ N/A

Driver side ☒ Yes-Pass ☐ **No-Fail**

Passenger side ☐ No air bag ☒ Yes-Pass ☐ **No-Fail**

4.7 Is the pictogram at least 30 mm in diameter? (S4.5.1(b)(2)(iii))

Actual diameter, driver side **30** mm

Actual diameter, passenger side **30** mm

For vehicles with driver side air bag ONLY ☐ N/A

Driver side ☒ Yes-Pass ☐ **No-Fail**

Passenger side ☐ No air bag ☒ Yes-Pass ☐ **No-Fail**

4.8 Is the same side of the sun visor to which the sun visor label is affixed free of other information with the exception of an air bag maintenance label? (S4.5.1(b)(3)) and/or a rollover warning label specified in 49CFR Part 575 (S575.105)?

Driver side ☒ Yes-Pass ☐ **No-Fail**

Passenger side ☐ No air bag ☒ Yes-Pass ☐ **No-Fail**

4.9 Is the sun visor free of other information about air bags or the need to wear seat belts with the exception of the air bag alert label or the utility vehicle label?

Driver side ☒ Yes-Pass ☐ **No-Fail**

Passenger side ☐ No air bag ☒ Yes-Pass ☐ **No-Fail**

5. Air Bag Alert Label

5.1 Is the Sun Visor Warning Label visible when the sun visor is in the stowed position?

Driver ☒ Yes ☐ No

Passenger ☒ Yes ☐ No

If yes, go to 6

5.2 Does the label conform in content to the label shown in Figure 6c? (S4.5.1(c)(2)) ☐ Yes-Pass ☐ **No-Fail**

SUN VISOR LABEL VISIBLE WHEN VISOR IS IN UP POSITION

Circle and Line Red with White Background

Artwork Black with White Background

Text Yellow with Black Background

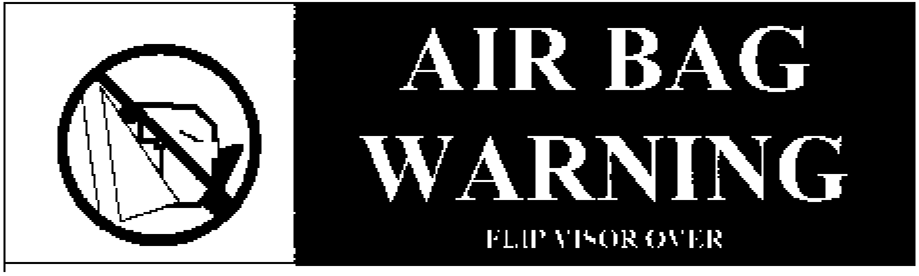


Figure 6c
(S4.5.1(c)(2))

FMVSS 208 Air Bag Labels, Cont'd.

5.3 Is the message area black with yellow text? (S4.5.1(c)(2)(i))

☐ Yes-Pass ☐ **No-Fail**

5.4 Is the message area at least 20 cm^2? (S4.5.1(c)(2)(i))

Actual message area **N/A** cm^2 ☐ Yes-Pass ☐ **No-Fail**

5.5 Is the pictogram black with a red circle and slash on a white background? (S4.5.1(c)(2)(ii))

For vehicles with driver side air bag ONLY ☒ N/A

☐ Yes-Pass ☐ **No-Fail**

5.6 Is the pictogram at least 20 mm in diameter? (S4.5.1(c)(2)(ii))

Actual diameter is **N/A** mm

For vehicles with driver side air bag ONLY ☒ N/A

☐ Yes-Pass ☐ **No-Fail**

6. Label On the Dash

6.1 Does the vehicle have a passenger air bag?

☒ Yes ☐ No

If no, this checklist is complete.

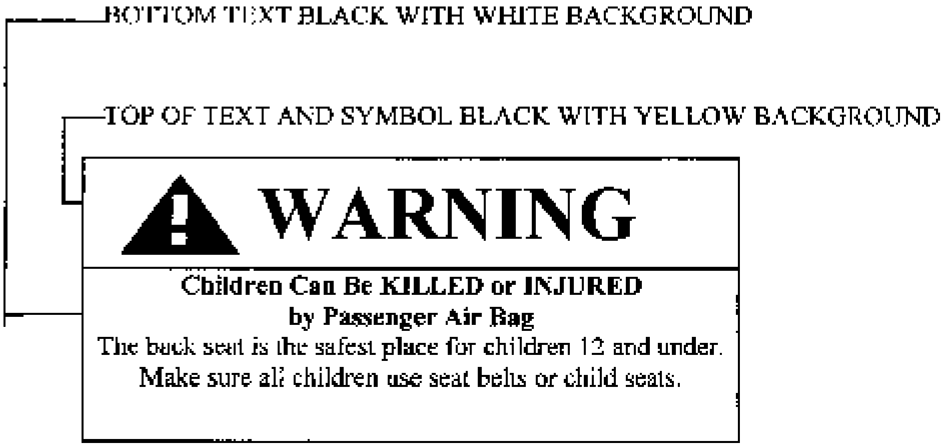
6.2 Does the vehicle have a label on the dash or steering wheel hub? (S4.5.1(c))

☒ Yes-Pass ☐ **No-Fail**

6.3 Does the label conform in content **(vehicles without back seats may omit the statement: "The back seat is the safest place for children 12 and under.")** (S4.5.1(e)(iii)) to the label shown in Figure 7? (S4.5.1(e))

☒ Yes-Pass ☐ **No-Fail**

Figure 7
(S4.5.1(c))


BOTTOM TEXT BLACK WITH WHITE BACKGROUND
TOP OF TEXT AND SYMBOL BLACK WITH YELLOW BACKGROUND
WARNING

Children Can Be KILLED or INJURED
by Passenger Air Bag
The back seat is the safest place for children 12 and under.
Make sure all children use seat belts or child seats.

FMVSS 208 Air Bag Labels, Cont'd.

6.4 Is the heading area yellow with the word "warning" and the alert symbol in black?
(S4.5.1(e)(i)) ☒ Yes-Pass ☐ **No-Fail**

6.5 Is the message white with black text? (S4.5.1(e)(ii))
☒ Yes-Pass ☐ **No-Fail**

6.6 Is the message area at least 30 cm^2? (S4.5.1(e)(ii))
Actual message area **30** cm^2 ☒ Yes-Pass ☐ **No-Fail**

FMVSS 208 Rear Outboard Seating Position Seat Belts

Vehicle Model Year/Make/Model/Body Style: 2003/Ford/Crown Victoria/4-door

NHTSA No.: C30203 Technician: Ronald D. Stoner Date: 01/31/03

Do all rear outboard seating positions have type 2 seat belts?

☒ Yes; ☐ No; ☐ N/A (No Back Seat)

If No, describe the seat belt installed, the seat location, and any other information about the seat that would explain why a type 2 belt was not installed.

FMVSS 208 Lap Belt Lockability

Passenger cars, trucks, buses, and multipurpose passenger
vehicles with a GVWR of 10,000 pounds or less. (S7.1.1.5)
Complete one of these forms for **each** designated seating position with forward-facing seats,
other than the driver's seat, or seats that can be adjusted to forward-facing **and** that has seat belt
retractors that are not automatic retractors. (S7.1.1.5(c))

Vehicle Model Year/Make/Model/Body Style: 2003/Ford/Crown Victoria/4-door

NHTSA No.: C30203 Technician: Steve Bell and Ron Stoner Date: 01/17/2003

Designated Seating Position: Right Front

☒1. Record test seat position: Mid
(S7.1.1.5(c)(1)) (Any position is acceptable.)

☒2. Buckle the seat belt. (S7.1.1.5(c)(1))

☒3. Complete any procedures recommended in the vehicle owner's manual to activate any locking feature. (S7.1.1.5(c)(1))

☒4. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part to the vehicle? (S7.1.1.5(a)) ☒ Yes-Pass ☐ **No-Fail**

☒5. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT require inverting, twisting or deforming of the belt webbing? (S7.1.1.5(a)) ☒ Yes-Pass ☐ **No-Fail**

☒6. Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing?
If yes, go to 6.1. If no, go to 7. ☒ Yes ☐ No

6.1 Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b)) ☒ Yes-Pass ☐ **No-Fail**

FMVSS 208 Lap Belt Lockability, Cont'd.

Vehicle Model Year/Make/Model/Body Style: 2003/Ford/Crown Victoria/4-door

NHTSA No.: C30203 Technician: Steve Bell and Ron Stoner Date: 01/17/2003

Designated Seating Position: Right Front

☒7. Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))

☒8. Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))

☒9. Adjust the lap belt or lap belt portion of the seat belt assembly according to any procedures recommended in the vehicle owner's manual to activate any locking feature so that the webbing between points A and B is at the maximum length allowed by the belt system. (S7.1.1.5(c)(2))

☒10. Measure and record the distance between points A and B along the longitudinal centerline of the webbing for the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2)) Measured distance between A and B **47.2** inches.

☒11. Readjust the belt system so that the webbing between points A and B is at any length that is 5 inches or more shorter than the maximum length of the webbing. (S7.1.1.5(c)(3))

☒12. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device in figure 5. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4)) Measured force application angle **10** degrees. (Spec. 5~15 degrees)

☒13. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4)) Measured distance between A and B **19.1** inches.

FMVSS 208 Lap Belt Lockability, Cont'd.

Vehicle Model Year/Make/Model/Body Style: 2003/Ford/Crown Victoria/4-door

NHTSA No.: C30203 Technician: Steve Bell and Ron Stoner Date: 01/17/2003

Designated Seating Position: Right Front

☒14. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

Record onset rate **5** lbs./sec (spec. 10 ~50 lb/sec)

The measured distance between A and B is **19.5** inches (S7.1.1.5(c)(6))

☒15. Subtract the measurement in 13 from the measurement in 14. Is the difference 2 inches or less? (S7.1.1.5 (c)(7))

14-13= **0.4** inches ☒ Yes-Pass ☐ **No-Fail**

☒16. Subtract the measurement in 14 from the measurement in 10. Is the difference 3 inches or more? (S7.1.1.5(c)(8))

10-14= **27.7** inches. ☒ Yes-Pass ☐ **No-Fail**

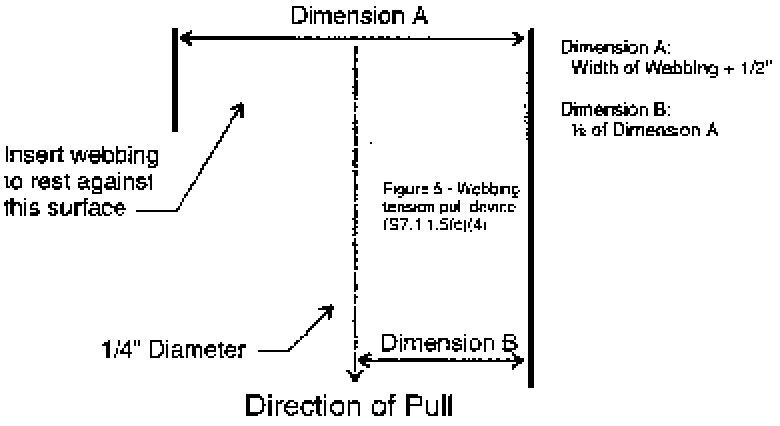


Figure 5 - Webbing tension pull device (S7.1.1.5(c)(4))

FMVSS 208 Lap Belt Lockability

Passenger cars, trucks, buses, and multipurpose passenger
vehicles with a GVWR of 10,000 pounds or less. (S7.1.1.5)
Complete one of these forms for **each** designated seating position with forward-facing seats,
other than the driver's seat, or seats that can be adjusted to forward-facing **and** that has seat belt
retractors that are not automatic retractors. (S7.1.1.5(c))

Vehicle Model Year/Make/Model/Body Style: 2003/Ford/Crown Victoria/4-door

NHTSA No.: C30203 Technician: Steve Bell and Ron Stoner Date: 01/17/2003

Designated Seating Position: Right Rear

☒1. Record test seat position: Fixed
(S7.1.1.5(c)(1)) (Any position is acceptable.)

☒2. Buckle the seat belt. (S7.1.1.5(c)(1))

☒3. Complete any procedures recommended in the vehicle owner's manual to activate any locking feature. (S7.1.1.5(c)(1))

☒4. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part to the vehicle? (S7.1.1.5(a)) ☒ Yes-Pass ☐ **No-Fail**

☒5. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT require inverting, twisting or deforming of the belt webbing? (S7.1.1.5(a)) ☒ Yes-Pass ☐ **No-Fail**

☒6. Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing?

If yes, go to 6.1. If no, go to 7. ☒ Yes ☐ No

6.1 Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b)) ☒ Yes-Pass ☐ **No-Fail**

FMVSS 208 Lap Belt Lockability, Cont'd.

Vehicle Model Year/Make/Model/Body Style: 2003/Ford/Crown Victoria/4-door

NHTSA No.: C30203 Technician: Steve Bell and Ron Stoner Date: 01/17/2003

Designated Seating Position: Right Rear

☒7. Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))

☒8. Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))

☒9. Adjust the lap belt or lap belt portion of the seat belt assembly according to any procedures recommended in the vehicle owner's manual to activate any locking feature so that the webbing between points A and B is at the maximum length allowed by the belt system. (S7.1.1.5(c)(2))

☒10. Measure and record the distance between points A and B along the longitudinal centerline of the webbing for the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2)) Measured distance between A and B **49.6** inches.

☒11. Readjust the belt system so that the webbing between points A and B is at any length that is 5 inches or more shorter than the maximum length of the webbing. (S7.1.1.5(c)(3))

☒12. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device in figure 5. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4)) Measured force application angle **10** degrees. (Spec. 5~15 degrees)

☒13. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4)) Measured distance between A and B **18.1** inches.

Vehicle Model Year/Make/Model/Body Style: 2003/Ford/Crown Victoria/4-door

NHTSA No.: C30203 Technician: Steve Bell and Ron Stoner Date: 01/17/2003

Designated Seating Position: Right Rear

☒14. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

Record onset rate **5** lbs/sec (spec. 10 ~50 lb/sec)

The measured distance between A and B is **18.7** inches (S7.1.1.5(c)(6))

☒15. Subtract the measurement in 13 from the measurement in 14. Is the difference 2 inches or less? (S7.1.1.5 (c)(7))

14-13= **0.6** inches ☒ Yes-Pass ☐ **No-Fail**

☒16. Subtract the measurement in 14 from the measurement in 10. Is the difference 3 inches or more? (S7.1.1.5(c)(8))

10-14= **30.9** inches. ☒ Yes-Pass ☐ **No-Fail**

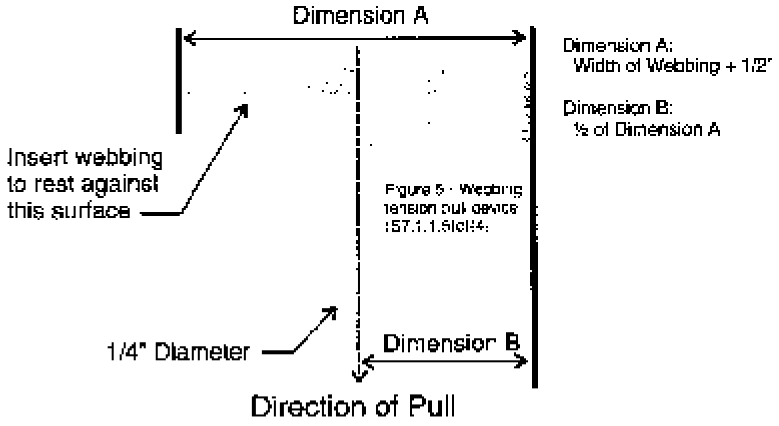


Figure 5 - Webbing tension pull device (S7.1.1.5(c)(4))

FMVSS 208 Lap Belt Lockability

Passenger cars, trucks, buses, and multipurpose passenger
vehicles with a GVWR of 10,000 pounds or less. (S7.1.1.5)
Complete one of these forms for **each** designated seating position with forward-facing seats,
other than the driver's seat, or seats that can be adjusted to forward-facing **and** that has seat belt
retractors that are not automatic retractors. (S7.1.1.5(c))

Vehicle Model Year/Make/Model/Body Style: 2003/Ford/Crown Victoria/4-door

NHTSA No.: C30203 Technician: Steve Bell and Ron Stoner Date: 01/17/2003

Designated Seating Position: Center Rear

☒1. Record test seat position: Fixed
(S7.1.1.5(c)(1)) (Any position is acceptable.)

☒2. Buckle the seat belt. (S7.1.1.5(c)(1))

☒3. Complete any procedures recommended in the vehicle owner's manual to activate any locking feature. (S7.1.1.5(c)(1))

☒4. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part to the vehicle? (S7.1.1.5(a)) ☒ Yes-Pass ☐ **No-Fail**

☒5. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT require inverting, twisting or deforming of the belt webbing? (S7.1.1.5(a)) ☒ Yes-Pass ☐ **No-Fail**

☒6. Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing?

If yes, go to 6.1. If no, go to 7. ☒ Yes ☐ No

6.1 Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b)) ☒ Yes-Pass ☐ **No-Fail**

FMVSS 208 Lap Belt Lockability, Cont'd.

Vehicle Model Year/Make/Model/Body Style: 2003/Ford/Crown Victoria/4-door

NHTSA No.: C30203 Technician: Steve Bell and Ron Stoner Date: 01/17/2003

Designated Seating Position: Center Rear

☒7. Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))

☒8. Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))

☒9. Adjust the lap belt or lap belt portion of the seat belt assembly according to any procedures recommended in the vehicle owner's manual to activate any locking feature so that the webbing between points A and B is at the maximum length allowed by the belt system. (S7.1.1.5(c)(2))

☒10. Measure and record the distance between points A and B along the longitudinal centerline of the webbing for the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2)) Measured distance between A and B **61.0** inches.

☒11. Readjust the belt system so that the webbing between points A and B is at any length that is 5 inches or more shorter than the maximum length of the webbing. (S7.1.1.5(c)(3))

☒12. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device in figure 5. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4)) Measured force application angle **10** degrees. (Spec. 5~15 degrees)

☒13. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4)) Measured distance between A and B **24.8** inches.

FMVSS 208 Lap Belt Lockability, Cont'd.

Vehicle Model Year/Make/Model/Body Style: 2003/Ford/Crown Victoria/4-door

NHTSA No.: C30203 Technician: Steve Bell and Ron Stoner Date: 01/17/2003

Designated Seating Position: Center Rear

☒14. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

Record onset rate **5** lbs/sec (spec. 10 --50 lb/sec)

The measured distance between A and B is **25.6** inches (S7.1.1.5(c)(6))

☒15. Subtract the measurement in 13 from the measurement in 14. Is the difference 2 inches or less? (S7.1.1.5 (c)(7))

14-13= **0.8** inches ☒ Yes-Pass ☐ **No-Fail**

☒16. Subtract the measurement in 14 from the measurement in 10. Is the difference 3 inches or more? (S7.1.1.5(c)(8))

10-14= **35.4** inches. ☒ Yes-Pass ☐ **No-Fail**

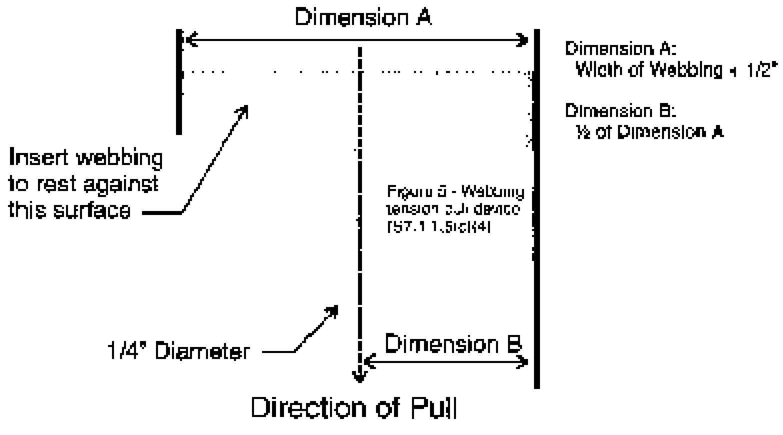


Figure 5 - Webbing tension pull device (S7.1.1.5(c)(4))

FMVSS 208 Lap Belt Lockability

Passenger cars, trucks, buses, and multipurpose passenger vehicles with a GVWR of 10,000 pounds or less. (S7.1.1.5)

Complete one of these forms for **each** designated seating position with forward-facing seats, other than the driver's seat, or seats that can be adjusted to forward-facing **and** that has seat belt retractors that are not automatic retractors. (S7.1.1.5(c))

Vehicle Model Year/Make/Model/Body Style: 2003/Ford/Crown Victoria/4-door

NHTSA No.: C30203 Technician: Steve Bell and Ron Stoner Date: 01/17/2003

Designated Seating Position: Left Rear

☒1. Record test seat position: Fixed
(S7.1.1.5(c)(1)) (Any position is acceptable.)

☒2. Buckle the seat belt. (S7.1.1.5(c)(1))

☒3. Complete any procedures recommended in the vehicle owner's manual to activate any locking feature. (S7.1.1.5(c)(1))

☒4. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part to the vehicle? (S7.1.1.5(a)) ☒ Yes-Pass ☐ **No-Fail**

☒5. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT require inverting, twisting or deforming of the belt webbing? (S7.1.1.5(a)) ☒ Yes-Pass ☐ **No-Fail**

☒6. Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing?
If yes, go to 6.1. If no, go to 7. ☒ Yes ☐ No

6.1 Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b)) ☒ Yes-Pass ☐ **No-Fail**

FMVSS 208 Lap Belt Lockability, Cont'd.

Vehicle Model Year/Make/Model/Body Style: 2003/Ford/Crown Victoria/4-door

NHTSA No.: C30203 Technician: Steve Bell and Ron Stoner Date: 01/17/2003

Designated Seating Position: Left Rear

☒7. Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))

☒8. Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))

☒9. Adjust the lap belt or lap belt portion of the seat belt assembly according to any procedures recommended in the vehicle owner's manual to activate any locking feature so that the webbing between points A and B is at the maximum length allowed by the belt system. (S7.1.1.5(c)(2))

☒10. Measure and record the distance between points A and B along the longitudinal centerline of the webbing for the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2)) Measured distance between A and B **48.6** inches.

☒11. Readjust the belt system so that the webbing between points A and B is at any length that is 5 inches or more shorter than the maximum length of the webbing. (S7.1.1.5(c)(3))

☒12. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device in figure 5. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4)) Measured force application angle **10** degrees. (Spec. 5~15 degrees)

☒13. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4)) Measured distance between A and B **19.5** inches.

FMVSS 208 Lap Belt Lockability, Cont'd.

Vehicle Model Year/Make/Model/Body Style: 2003/Ford/Crown Victoria/4-door

NHTSA No.: C30203 Technician: Steve Bell and Ron Stoner Date: 01/17/2003

Designated Seating Position: Left Rear

☒14. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

Record onset rate **5** lbs/sec (spec. 10 ~50 lb/sec)

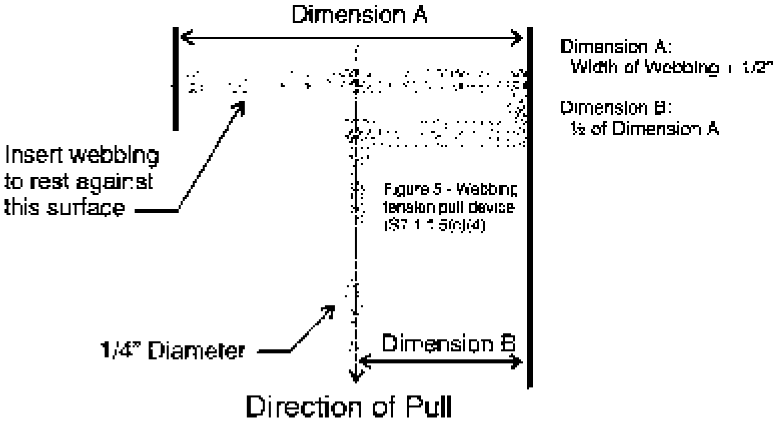
The measured distance between A and B is **19.8** inches (S7.1.1.5(c)(6))

☒15. Subtract the measurement in 13 from the measurement in 14. Is the difference 2 inches or less? (S7.1.1.5 (c)(7))

14-13= **0.3** inches ☒Yes-Pass ☐**No-Fail**

☒16. Subtract the measurement in 14 from the measurement in 10. Is the difference 3 inches or more? (S7.1.1.5(c)(8))

10-14= **28.8** inches. ☒Yes-Pass ☐**No-Fail**



FMVSS 208 Seat Belt Comfort And Convenience Test

Belt Contact Force (S7.4.3)

Test Vehicle NHTSA No.: C30203
Vehicle Model Year/Make/Model/Body Style: 2003/Ford/Crown Victoria/4-door
Designated Seating Position Tested: Right Rear
Date of Comfort and Convenience Check: 01/17/2003
Technician Performing Check: Steve Bell and Ron Stoner
GVWR: 5804 pounds

Test all Type 2 seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

1. Does the vehicle incorporate a webbing tension-relieving device?

☐ Yes-go to latchplate access
☒ No-continue with this check sheet

2. Adjustable seats are in the adjustment position midway between the forward most and rearmost positions. If an adjustment position does not exist midway between the forward most and rearmost positions, the next closest adjustment position to the rear of the midpoint is used. (S8.1.2)

☐ Check
☒ N/A

3. If separately adjustable in a vertical direction, the seats are at the lowest position.

☐ Check
☒ N/A

4. Place adjustable seat backs in the manufacturer's nominal design riding position in the manner specified by the manufacturer.

☐ Check
☒ N/A

5. Place any adjustable anchorages at the manufacturer's nominal design position for a 50th percentile adult male (50M) occupant. This information will be furnished by the COTR.

☐ Check
☒ N/A

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

Belt Contact Force (S7.4.3)

6. Place each adjustable head restraint in its highest adjustment position.

☐ Check
☒ N/A

7. Adjustable lumbar supports are positioned so that the lumbar support is in its lowest adjustment position. (S8.1.3)

☐ Check
☒ N/A

8. Position the test dummy according to the dummy position placement instructions in Appendix B of the Laboratory Test Procedure.

☒ Check

9. Fasten the seat belt latch. Pull either 12 inches of belt webbing or the maximum available amount of belt webbing, whichever is less, from the retractor and then release it, allowing the belt webbing to return to the dummy's chest. Locate the point where the centerline of the upper torso belt webbing crosses the midsagittal line on the dummy's chest. At that point pull the belt webbing out 3 inches from the dummy's chest and release until it is within one inch from the dummy's chest. (S10.8) Measure the contact force exerted by the belt webbing on the dummy's chest. Contact the COTR if the contact force exceeds 0.7 pounds. Contact force is 0.54 pounds.

☒ 0.0 to 0.7 pounds - Pass
☐ **greater than 0.7 pounds - FAIL***

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* If the seat belts are voluntarily installed by the manufacturer they do not have to comply.

FMVSS 208 Seat Belt Comfort And Convenience Test

Belt Contact Force (S7.4.3)

Test Vehicle NHTSA No.: C30203
Vehicle Model Year/Make/Model/Body Style: 2003/Ford/Crown Victoria/4-door
Designated Seating Position Tested: Center Rear
Date of Comfort and Convenience Check: 01/17/2003
Technician Performing Check: Steve Bell and Ron Stoner
GVWR: 5804 pounds

Test all Type 2 seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

1. Does the vehicle incorporate a webbing tension-relieving device?

☐ Yes-go to latchplate access
☒ No-continue with this check sheet

2. Adjustable seats are in the adjustment position midway between the forward most and rearmost positions. If an adjustment position does not exist midway between the forward most and rearmost positions, the next closest adjustment position to the rear of the midpoint is used. (S8.1.2)

☐ Check
☒ N/A

3. If separately adjustable in a vertical direction, the seats are at the lowest position.

☐ Check
☒ N/A

4. Place adjustable seat backs in the manufacturer's nominal design riding position in the manner specified by the manufacturer.

☐ Check
☒ N/A

5. Place any adjustable anchorages at the manufacturer's nominal design position for a 50th percentile adult male (50M) occupant. This information will be furnished by the COTR.

☐ Check
☒ N/A

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

Belt Contact Force (S7.4.3)

6. Place each adjustable head restraint in its highest adjustment position.

☐ Check
☒ N/A

7. Adjustable lumbar supports are positioned so that the lumbar support is in its lowest adjustment position. (S8.1.3)

☐ Check
☒ N/A

8. Position the test dummy according to the dummy position placement instructions in Appendix B of the Laboratory Test Procedure.

☒ Check

9. Fasten the seat belt latch. Pull either 12 inches of belt webbing or the maximum available amount of belt webbing, whichever is less, from the retractor and then release it, allowing the belt webbing to return to the dummy's chest. Locate the point where the centerline of the upper torso belt webbing crosses the midsagittal line on the dummy's chest. At that point pull the belt webbing out 3 inches from the dummy's chest and release until it is within one inch from the dummy's chest. (S10.8) Measure the contact force exerted by the belt webbing on the dummy's chest. Contact the COTR if the contact force exceeds 0.7 pounds. Contact force is **0.43** pounds.

☒ 0.0 to 0.7 pounds - Pass
☐ **greater than 0.7 pounds - FAIL***

* If the seat belts are voluntarily installed by the manufacturer they do not have to comply.

FMVSS 208 Seat Belt Comfort And Convenience Test

Belt Contact Force (S7.4.3)

Test Vehicle NHTSA No.: C30203
Vehicle Model Year/Make/Model/Body Style: 2003/Ford/Crown Victoria/4-door
Designated Seating Position Tested: Left Rear
Date of Comfort and Convenience Check: 01/17/2003
Technician Performing Check: Steve Bell and Ron Stoner
GVWR: 5804 pounds

Test all Type 2 seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

1. Does the vehicle incorporate a webbing tension-relieving device?

   ☐ Yes-go to latchplate access
   ☒ No-continue with this check sheet

2. Adjustable seats are in the adjustment position midway between the forward most and rearmost positions. If an adjusment position does not exist midway between the forward most and rearmost positions, the next closest adjustment position to the rear of the midpoint is used. (S8.1.2)

   ☐ Check
   ☒ N/A

3. If separately adjustable in a vertical direction, the seats are at the lowest position.

   ☐ Check
   ☒ N/A

4. Place adjustable seat backs in the manufacturer's nominal design riding position in the manner specified by the manufacturer.

   ☐ Check
   ☒ N/A

5. Place any adjustable anchorages at the manufacturer's nominal design position for a 50th percentile adult male (50M) occupant. This information will be furnished by the COTR.

   ☐ Check
   ☒ N/A

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

Belt Contact Force (S7.4.3)

6. Place each adjustable head restraint in its highest adjustment position.

☐ Check
☒ N/A

7. Adjustable lumbar supports are positioned so that the lumbar support is in its lowest adjustment position. (S8.1.3)

☐ Check
☒ N/A

8. Position the test dummy according to the dummy position placement instructions in Appendix B of the Laboratory Test Procedure.

☒ Check

9. Fasten the seat belt latch. Pull either 12 inches of belt webbing or the maximum available amount of belt webbing, whichever is less, from the retractor and then release it, allowing the belt webbing to return to the dummy's chest. Locate the point where the centerline of the upper torso belt webbing crosses the midsagittal line on the dummy's chest. At that point pull the belt webbing out 3 inches from the dummy's chest and release until it is within one inch from the dummy's chest. (S10.8) Measure the contact force exerted by the belt webbing on the dummy's chest. Contact the COTR if the contact force exceeds 0.7 pounds. Contact force is **0.53** pounds.

☒ 0.0 to 0.7 pounds - Pass
☐ **greater than 0.7 pounds - FAIL.***

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* If the seat belts are voluntarily installed by the manufacturer they do not have to comply.

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.
Latchplate Access (S7.4.4)

Test Vehicle NHTSA No.: C30203
Vehicle Model Year/Make/Model/Body Style: 2003/Ford/Crown Victoria/4-door
Designated Seating Position Tested: Not applicable, vehicle was a passenger car
Date of Comfort and Convenience Check: 01/17/2003
Technician Performing Check: Steve Bell and Ron Stoner
GVWR: 5804 pounds

Test all front outboard seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

1. Position the seat in its forward most adjustment position. ☐ Check

2. Position the test dummy using the procedures in Appendix B of the Laboratory Test Procedure. (Some modifications to the positioning procedure may need to be made because the seat is in its forward most position.) ☐ Check

3. Position the adjustable seat belt anchorage in the manufacturer's nominal design position for a 50th percentile adult male occupant. ☐ Check

4. Attach the inboard and outboard reach string following the instructions on Figure 1C of the Laboratory Test Procedure. ☐ Check

5. Place the latch plate in the stowed position. ☐ Check

6. Extend each line backward and outboard to generate arcs of the reach envelope of the test dummy's arms. Is the latchplate within the reach envelope?
   ☐ Yes-Pass; ☐ **No-Fail**

7. Using the clearance test block, specified in Figure 2C of the Laboratory Test Procedure, determine if there is sufficient clearance between the vehicle seat and the side of vehicle to allow the test block to move unhindered to the latchplate or buckle.
   ☐ Yes-Pass; ☐ **No-Fail**

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

Retraction (S7.4.5)

Test Vehicle NHTSA No.: C30203
Vehicle Model Year/Make/Model/Body Style: 2003/Ford/Crown Victoria/4-door
Designated Seating Position Tested: Not applicable, vehicle was a passenger car
Date of Comfort and Convenience Check: 01/17/2003
Technician Performing Check: Steve Bell and Ron Stoner
GVWR: 5804 pounds

Test all front outboard seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

1. Is the vehicle a passenger car or walk-in van-type vehicle? ☐ Yes ☐ No

   If yes, go to seat belt guides and hardware.

2. Adjustable seats are in the adjustment position midway between the forward most and rearmost positions. If an adjustment position does not exist midway between the forward most and rearmost positions, the next closest adjustment position to the rear of the midpoint is used. (S8.1.2) ☐ Check

3. If separately adjustable in a vertical direction, the seats are at the lowest position. ☐ Check

4. Place any adjustable seat backs in the manufacturer's nominal design riding position in the manner specified by the manufacturer. ☐ Check

5. Place any adjustable anchorages at the manufacturer's nominal design position for a 50th percentile adult male (50M) occupant. This information will be furnished by the COTR. ☐ Check

6. Place each adjustable head restraint in its highest adjustment position. ☐ Check

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

Retraction (S7.4.5)

7. Adjustable lumbar supports are positioned so that the lumbar support is in its lowest adjustment position. (S8.1.3) ☐ Check

8. Use anthropomorphic test dummies whose arms have been removed and position the dummies in the front outboard designated seating positions according to instructions in Appendix B of the Laboratory Test Procedure. ☐ Check

9. Restrain the dummies using the belt systems for the position being tested. ☐ Check

10. Stow outboard armrests that are capable of being stowed. ☐ Check

11. Check the statement that applies to this test vehicle:

    (A) The torso and lap belt webbing of the seat belt system automatically retracts to a stowed position when the adjacent vehicle door is in an open position and the seat belt latchplate is released. ☐ Pass

    (B) The torso and lap belt webbing of the seat belt system automatically retracts when the seat belt latchplate is released. ☐ Pass

    (C) Neither A or B apply. ☐ **Fail**

12. With the webbing and hardware in the stowed position are the webbing and hardware prevented from being pinched when the door is closed?

    ☐ Yes-Pass; ☐ **No-Fail**

13. If this test vehicle has an open body (without doors) and has a belt system with a tension-relieving device, does the belt system fully retract when the tension-relieving device is deactivated?

    ☐ N/A

    ☐ Yes-Pass; ☐ **No-Fail**

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

Seat Belt Guides And Hardware (S7.4.6)

Test Vehicle NHTSA No.: C30203
Vehicle Model Year/Make/Model/Body Style: 2003/Ford/Crown Victoria/4-door
Designated Seating Position Tested: Right Rear
Date of Comfort and Convenience Check: 01/17/2003
Technician Performing Check: Steve Bell and Ron Stoner
GVWR: 5804 pounds

Test seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

The requirements for accessibility **DO NOT APPLY** to:

A. Seats whose seat cushions are movable so that the seat back serves a function other than seating (S7.4.6.1(b)).

B. Seats which are removable.

C. Seats that are movable so that the space formerly occupied by the seat can be used for a secondary function.

If the seats in this vehicle are different than the criteria above, determine the following:

1. Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back?
   ☒ Yes: go to 2.
   ☐ No: this form is complete.

2. Does one of the following three parts, the seat belt latchplate, the buckle, or the seat belt webbing, stay on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant)?
   ☒ Yes-Pass; ☐ **No-Fail**

3. Are the remaining two seat belt parts accessible under normal conditions?
   ☒ Yes-Pass; ☐ **No-Fail**

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

Seat Belt Guides And Hardware (S7.4.6)

4. The buckle and latchplate do not pass through the guides or conduits provided and fall behind the seat when the following events occur in order:

   (A) The belt is completely retracted or, if the belt is nonretractable, the belt is unlatched.

   ☒ Check

   (B) The seat is moved to any position to which it is designed to be adjusted.

   ☒ Check

   (C) The seat back, if foldable, is folded forward as far as possible and then moved backward into position. ☒ Check

   ☒Yes-Pass; ☐**No-Fail**

5. Is the inboard receptacle end of the seat belt assembly, installed in the outboard designated seating position, accessible with the center arm rest in any position to which it can be adjusted (without moving the armrest)? ☐ Yes-Pass; ☐**No-Fail**

   Not applicable, no arm rest

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

Seat Belt Guides And Hardware (S7.4.6)

Test Vehicle NHTSA No.: C30203
Vehicle Model Year/Make/Model/Body Style: 2003/Ford/Crown Victoria/4-door
Designated Seating Position Tested: Center Rear
Date of Comfort and Convenience Check: 01/17/2003
Technician Performing Check: Steve Bell and Ron Stoner
GVWR: 5804 pounds

Test seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

The requirements for accessibility **DO NOT APPLY** to:

A. Seats whose seat cushions are movable so that the seat back serves a function other than seating (S7.4.6.1(b)).

B. Seats which are removable.

C. Seats that are movable so that the space formerly occupied by the seat can be used for a secondary function.

If the seats in this vehicle are different than the criteria above, determine the following:

1. Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back?

   ☒ Yes: go to 2.
   ☐ No: this form is complete.

2. Does one of the following three parts, the seat belt latchplate, the buckle, or the seat belt webbing, stay on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant)?

   ☒ Yes-Pass; ☐ **No-Fail**

3. Are the remaining two seat belt parts accessible under normal conditions?

   ☒ Yes-Pass; ☐ **No-Fail**

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

Seat Belt Guides And Hardware (S7.4.6)

4. The buckle and latchplate do not pass through the guides or conduits provided and fall behind the seat when the following events occur in order:

   (A) The belt is completely retracted or, if the belt is nonretractable, the belt is unlatched.

   ☒ Check

   (B) The seat is moved to any position to which it is designed to be adjusted.

   ☒ Check

   (C) The seat back, if foldable, is folded forward as far as possible and then moved backward into position.

   ☒ Check

   ☒Yes-Pass; ☐**No-Fail**

5. Is the inboard receptacle end of the seat belt assembly, installed in the outboard designated seating position, accessible with the center arm rest in any position to which it can be adjusted (without moving the armrest)? ☐ Yes-Pass; ☐**No-Fail**

   Not applicable, no arm rest

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

Seat Belt Guides And Hardware (S7.4.6)

Test Vehicle NHTSA No.: C30203
Vehicle Model Year/Make/Model/Body Style: 2003/Ford/Crown Victoria/4-door
Designated Seating Position Tested: Left Rear
Date of Comfort and Convenience Check: 01/17/2003
Technician Performing Check: Steve Bell and Ron Stoner
GVWR: 5804 pounds

Test seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

The requirements for accessibility **DO NOT APPLY** to:

A. Seats whose seat cushions are movable so that the seat back serves a function other than seating (S7.4.6.1(b)).

B. Seats which are removable.

C. Seats that are movable so that the space formerly occupied by the seat can be used for a secondary function.

If the seats in this vehicle are different than the criteria above, determine the following:

1. Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back?
   ☒ Yes: go to 2.
   ☐ No: this form is complete.

2. Does one of the following three parts, the seat belt latchplate, the buckle, or the seat belt webbing, stay on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant)?
   ☒ Yes-Pass; ☐ **No-Fail**

3. Are the remaining two seat belt parts accessible under normal conditions?
   ☒ Yes-Pass; ☐ **No-Fail**

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

Seat Belt Guides And Hardware (S7.4.6)

4. The buckle and latchplate do not pass through the guides or conduits provided and fall behind the seat when the following events occur in order:

   (A) The belt is completely retracted or, if the belt is nonretractable, the belt is unlatched.

   ☒ Check

   (B) The seat is moved to any position to which it is designed to be adjusted.

   ☒ Check

   (C) The seat back, if foldable, is folded forward as far as possible and then moved backward into position.

   ☒ Check

   ☒ Yes-Pass; ☐ **No-Fail**

5. Is the inboard receptacle end of the seat belt assembly, installed in the outboard designated seating position, accessible with the center arm rest in any position to which it can be adjusted (without moving the armrest)? ☐ Yes-Pass; ☐ **No-Fail**

   Not applicable, no arm rest

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

Seat Belt Guides And Hardware (S7.4.6)

Test Vehicle NHTSA No.: C30203
Vehicle Model Year/Make/Model/Body Style: 2003/Ford/Crown Victoria/4-door
Designated Seating Position Tested: Center Front
Date of Comfort and Convenience Check: 01/17/2003
Technician Performing Check: Steve Bell and Ron Stoner
GVWR: 5804 pounds

Test seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

The requirements for accessibility **DO NOT APPLY** to:

A. Seats whose seat cushions are movable so that the seat back serves a function other than seating (S7.4.6.1(b)).

B. Seats which are removable.

C. Seats that are movable so that the space formerly occupied by the seat can be used for a secondary function.

If the seats in this vehicle are different than the criteria above, determine the following:

1. Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back?
   ☒ Yes: go to 2.
   ☐ No: this form is complete.

2. Does one of the following three parts, the seat belt latchplate, the buckle, or the seat belt webbing, stay on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant)?
   ☒ Yes-Pass; ☐ **No-Fail**

3. Are the remaining two seat belt parts accessible under normal conditions?
   ☒ Yes-Pass; ☐ **No-Fail**

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

Seat Belt Guides And Hardware (S7.4.6)

4. The buckle and latchplate do not pass through the guides or conduits provided and fall behind the seat when the following events occur in order:

(A) The belt is completely retracted or, if the belt is nonretractable, the belt is unlatched.

☒ Check

(B) The seat is moved to any position to which it is designed to be adjusted.

☒ Check

(C) The seat back, if foldable, is folded forward as far as possible and then moved backward into position.

☒ Check

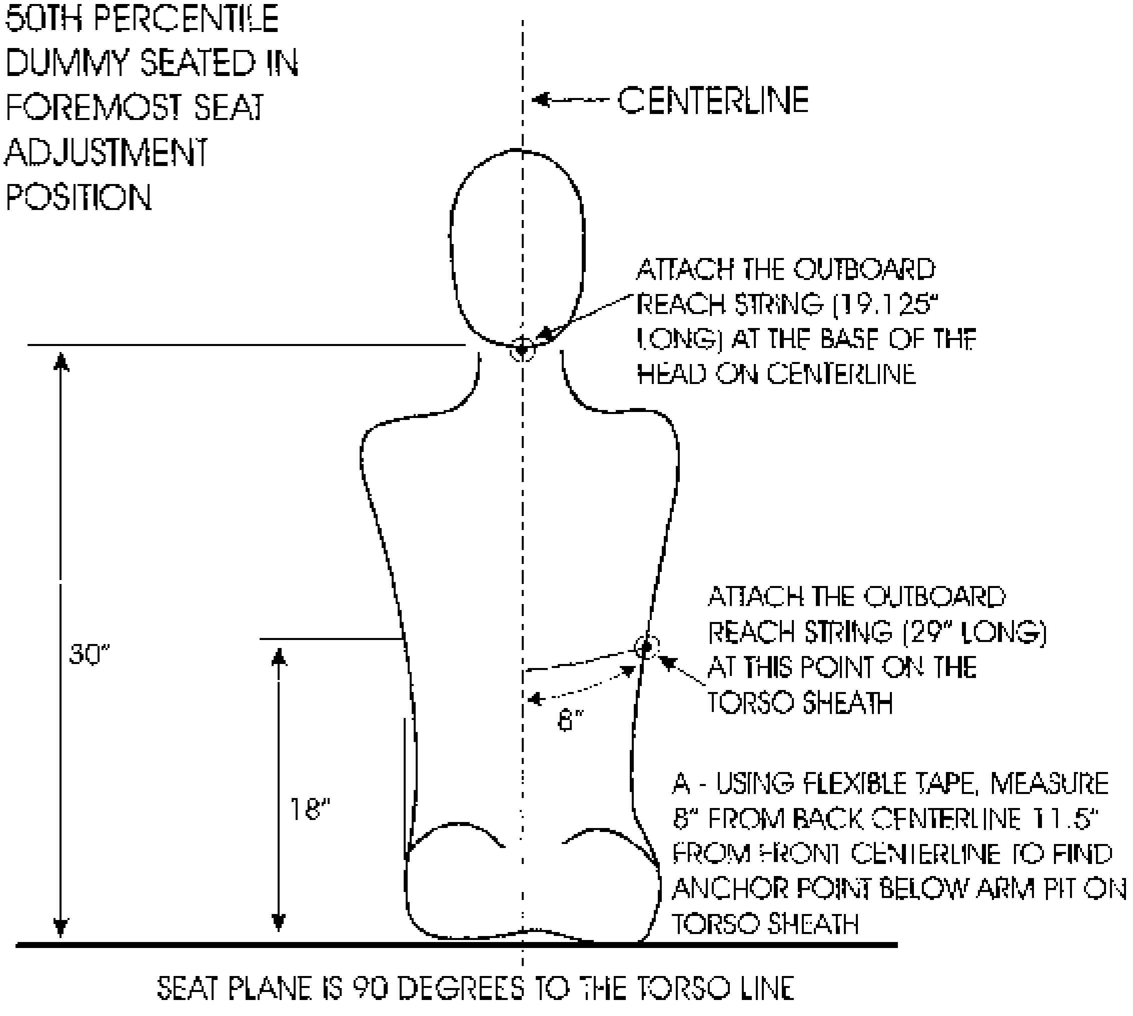
☒ Yes-Pass; ☐ **No-Fail**

5. Is the inboard receptacle end of the seat belt assembly, installed in the outboard designated seating position, accessible with the center arm rest in any position to which it can be adjusted (without moving the armrest)? ☐ Yes-Pass; ☐ **No-Fail**

Not applicable, no arm rest

LOCATION OF ANCHORING POINTS FOR LATCHPLATE REACH LIMITING CHAINS OR STRINGS TO TEST FOR LATCHPLATE ACCESSIBILITY

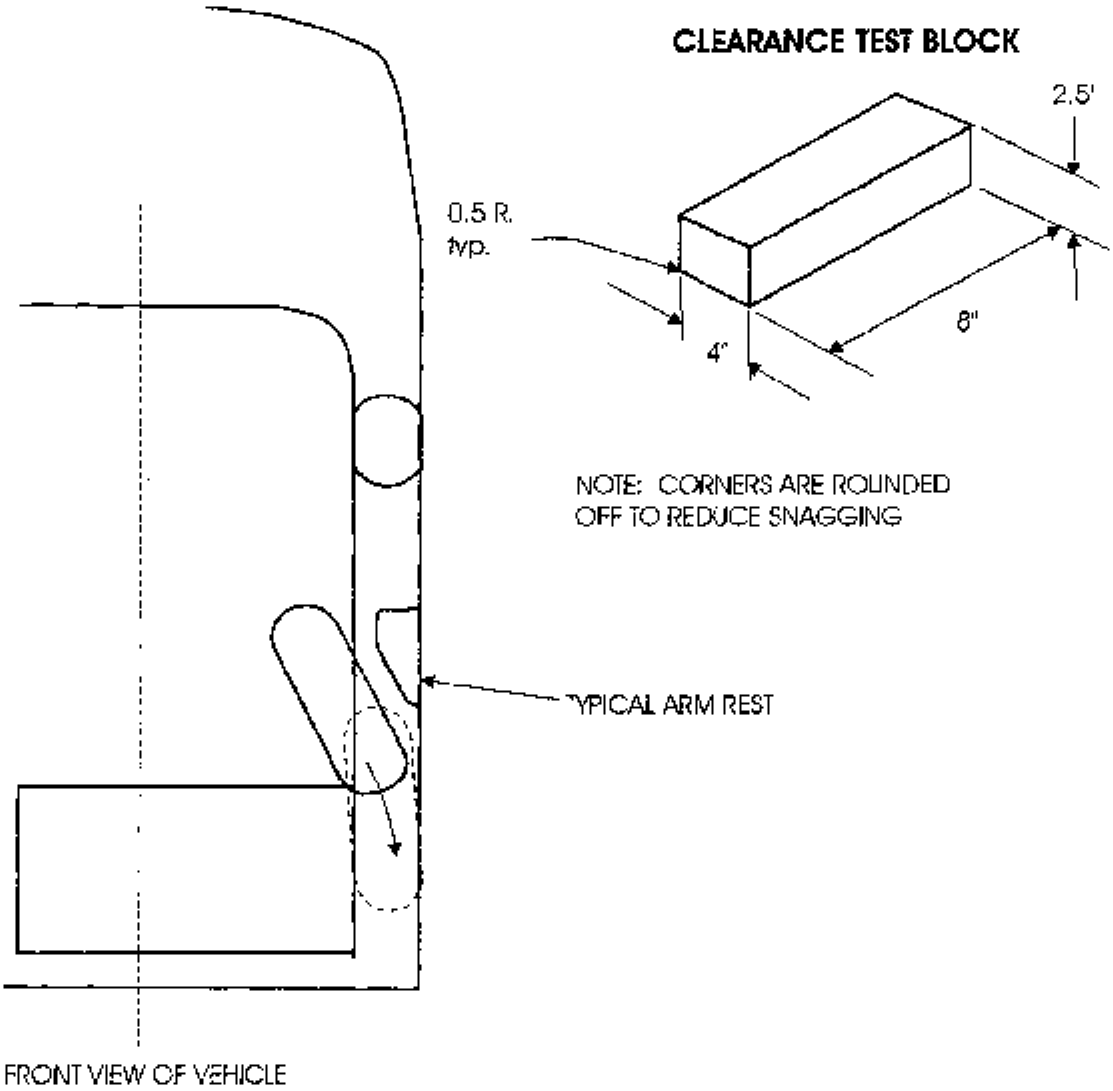
PART 572E DUMMY


50TH PERCENTILE DUMMY SEATED IN FOREMOST SEAT ADJUSTMENT POSITION
CENTERLINE
ATTACH THE OUTBOARD REACH STRING (19.125" LONG) AT THE BASE OF THE HEAD ON CENTERLINE
ATTACH THE OUTBOARD REACH STRING (29" LONG) AT THIS POINT ON THE TORSO SHEATH
30"
18"
8"
A - USING FLEXIBLE TAPE, MEASURE 8" FROM BACK CENTERLINE 11.5" FROM FRONT CENTERLINE TO FIND ANCHOR POINT BELOW ARM PIT ON TORSO SHEATH
SEAT PLANE IS 90 DEGREES TO THE TORSO LINE

REAR VIEW

Laboratory Test Procedure Figure 1C

USE OF CLEARANCE TEST BLOCK
TO DETERMINE HAND/ARM ACCESS



Laboratory Test Procedure Figure 2C

Appendix A

Photographs

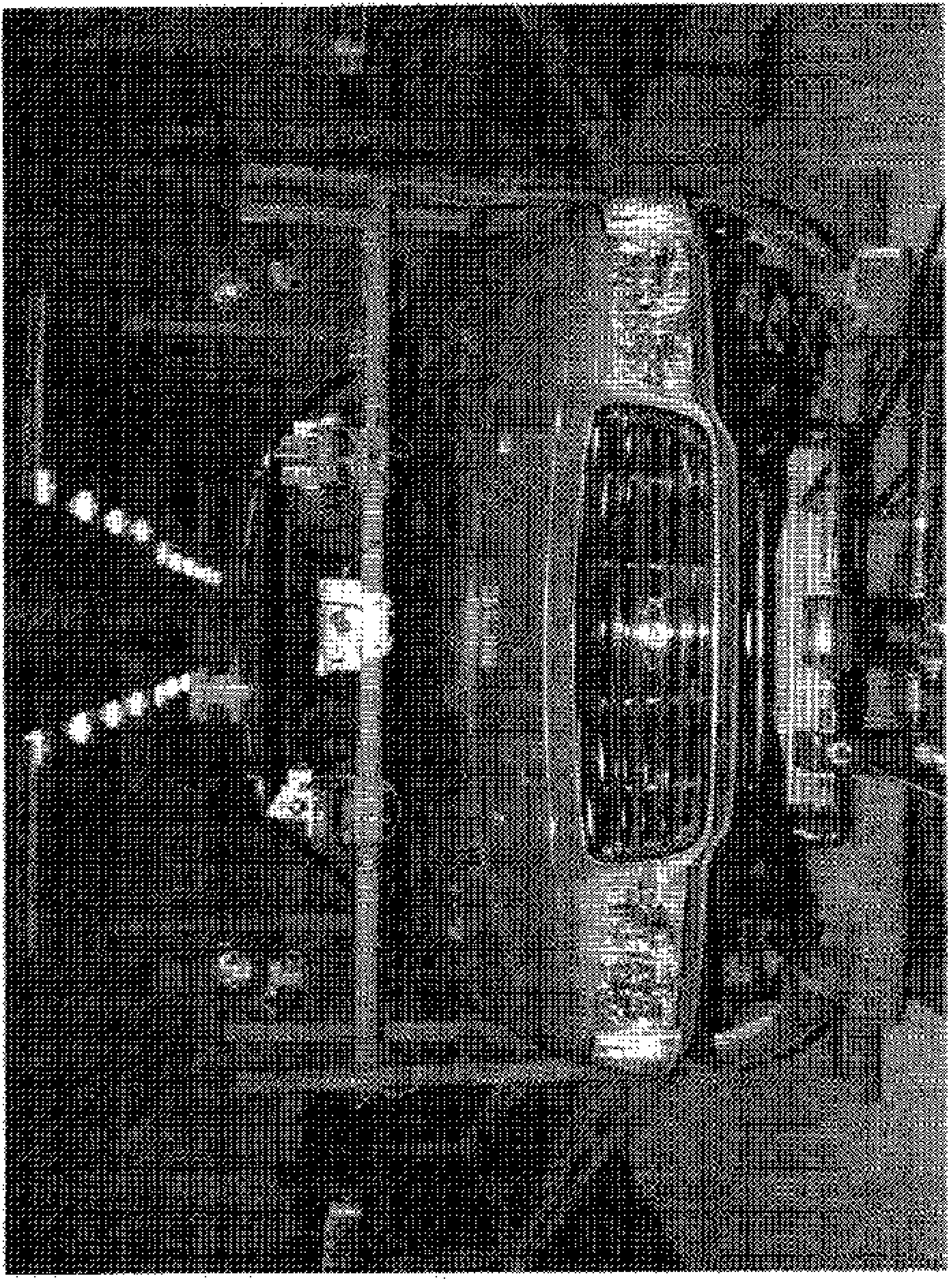


Figure A-1. Pre-Test Front View of Test Vehicle Mounted to Sled

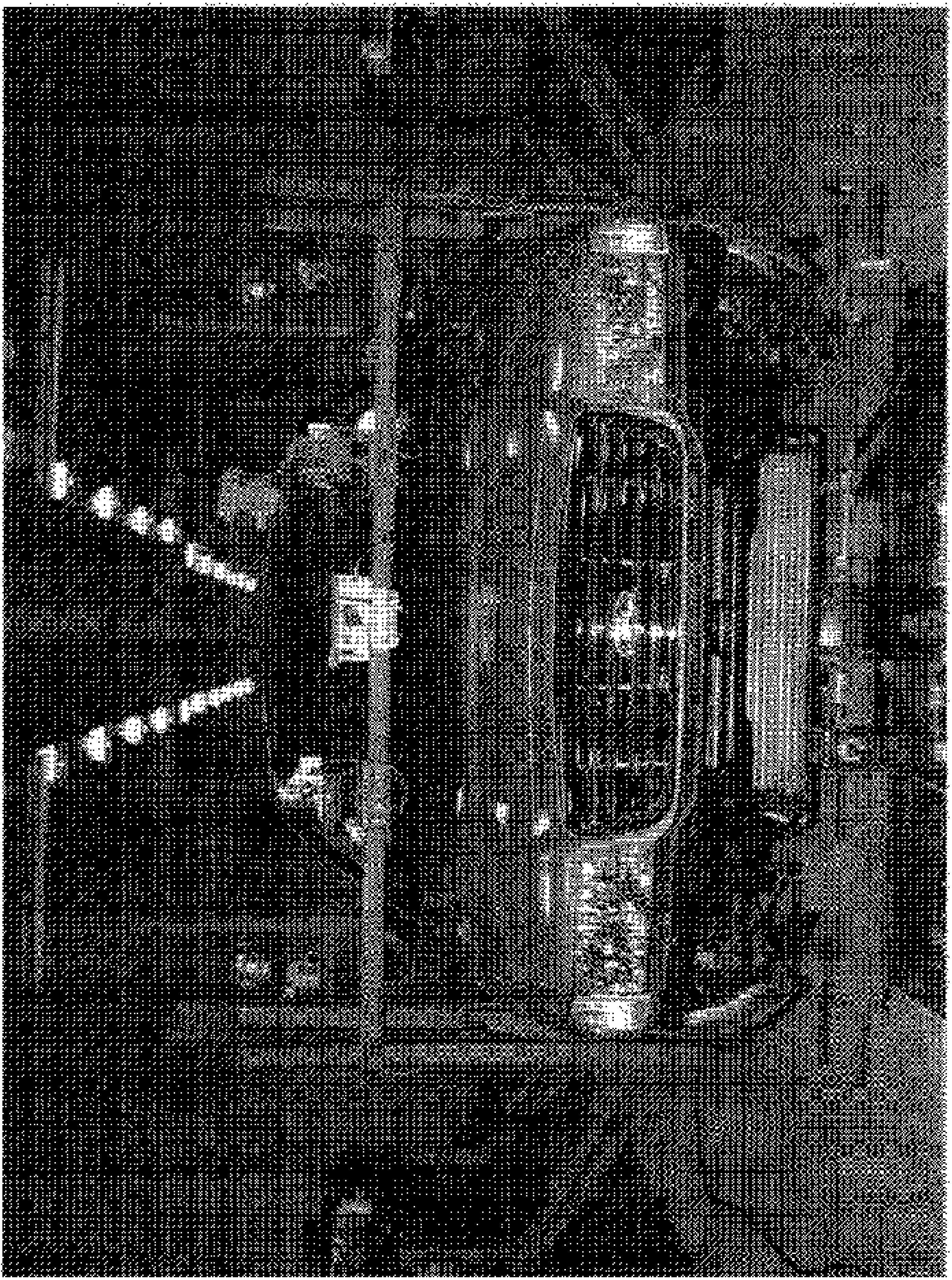


Figure A-2. Post-Test Front View of Test Vehicle Mounted to Sled

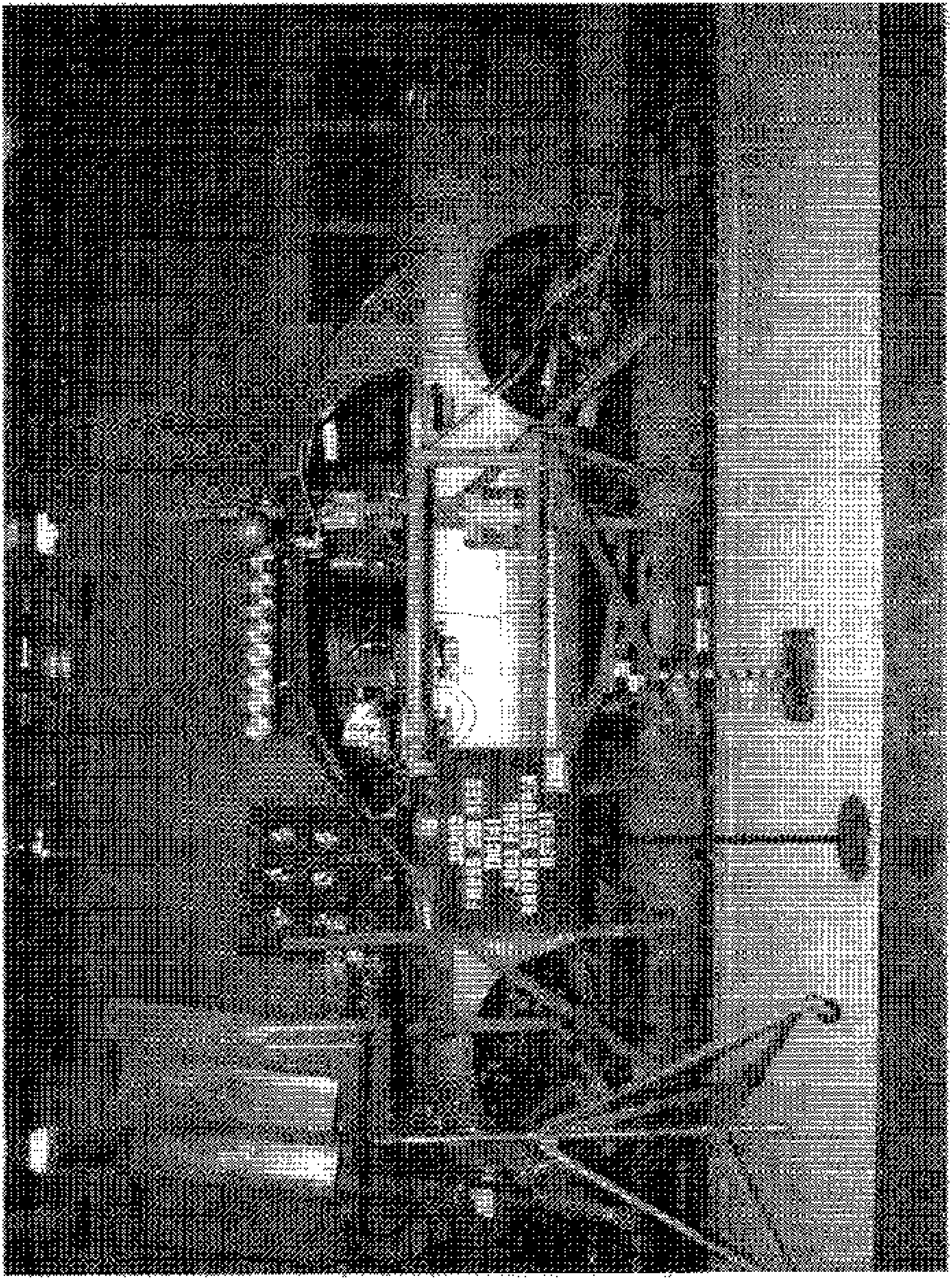


Figure A-3. Pre-Test Left Side View of Test Vehicle Mounted to Sled

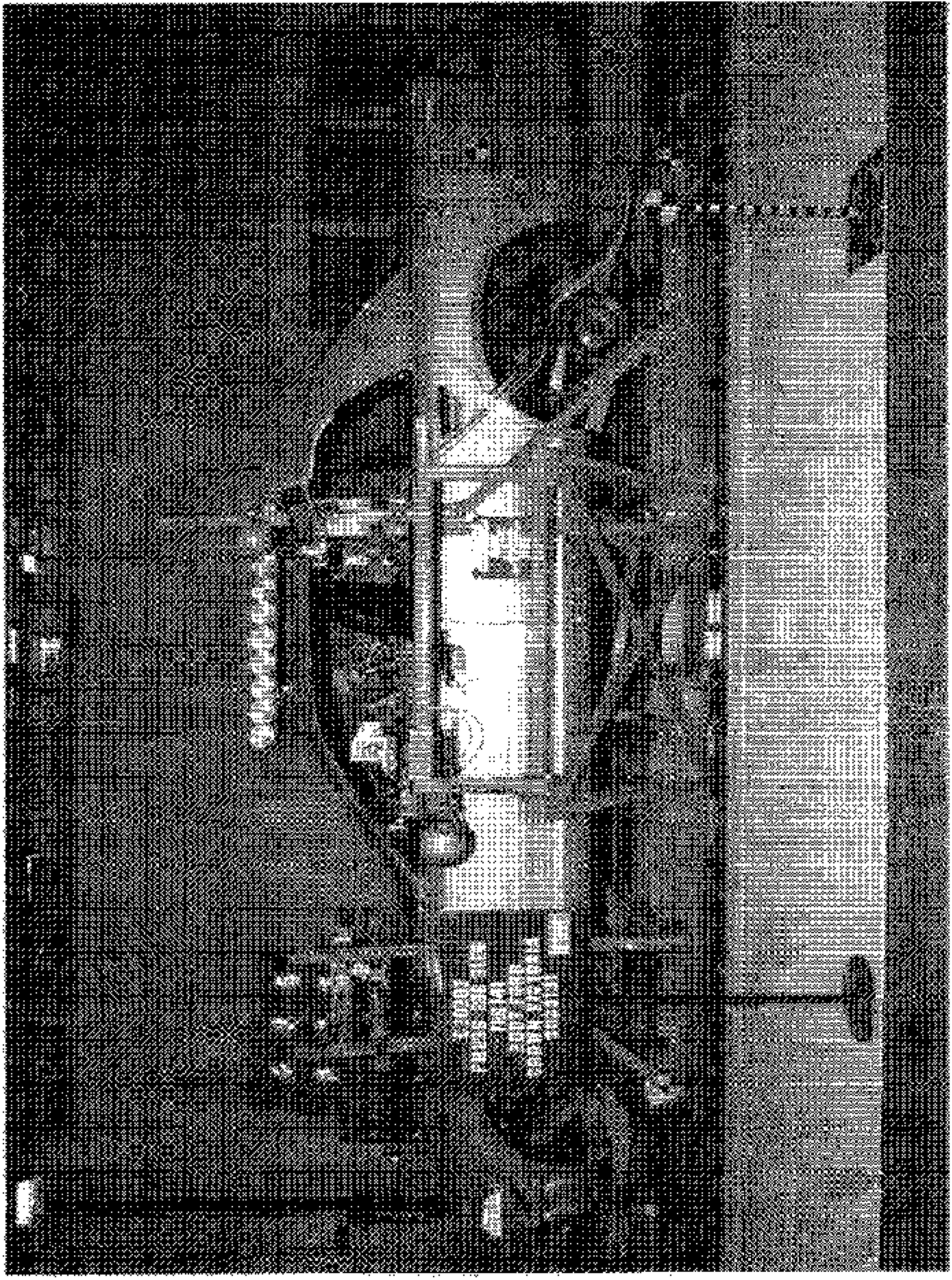


Figure A-4. Post-Test Left Side View of Test Vehicle Mounted to Sled

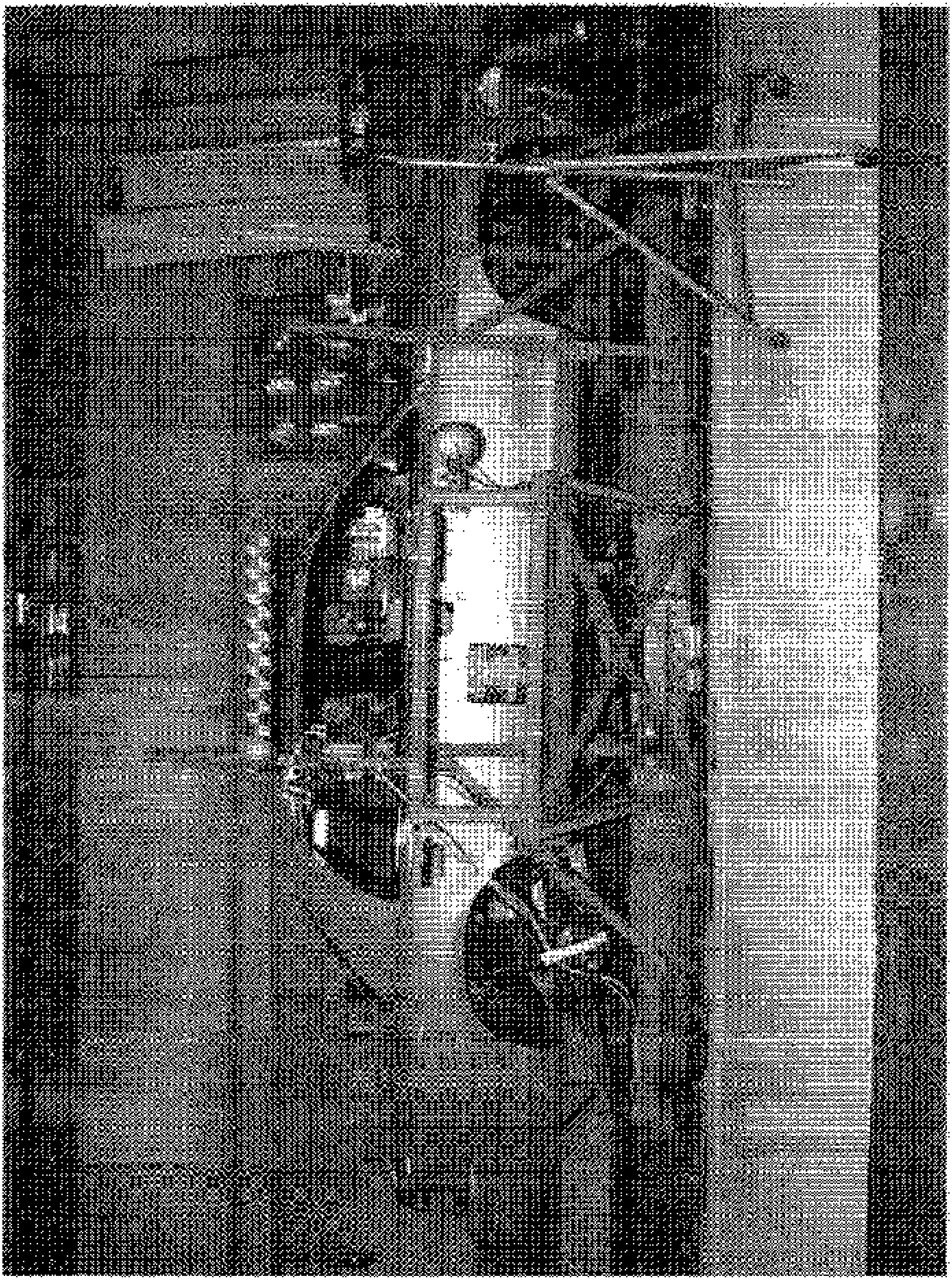


Figure A-5. Pre-Test Right Side View of Test Vehicle Mounted to Sled

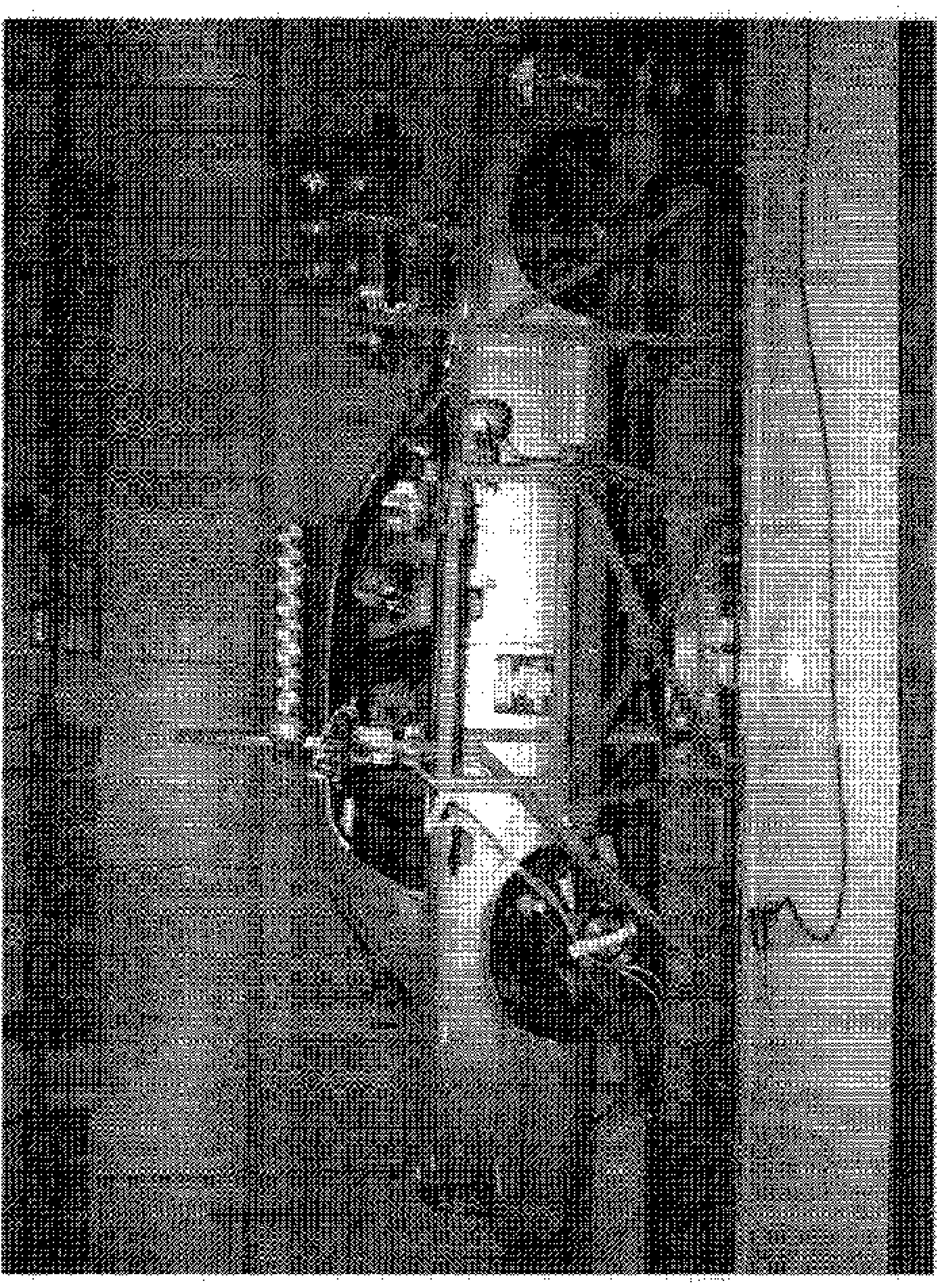


Figure A-6. Post-Test Right Side View of Test Vehicle Mounted to Sled

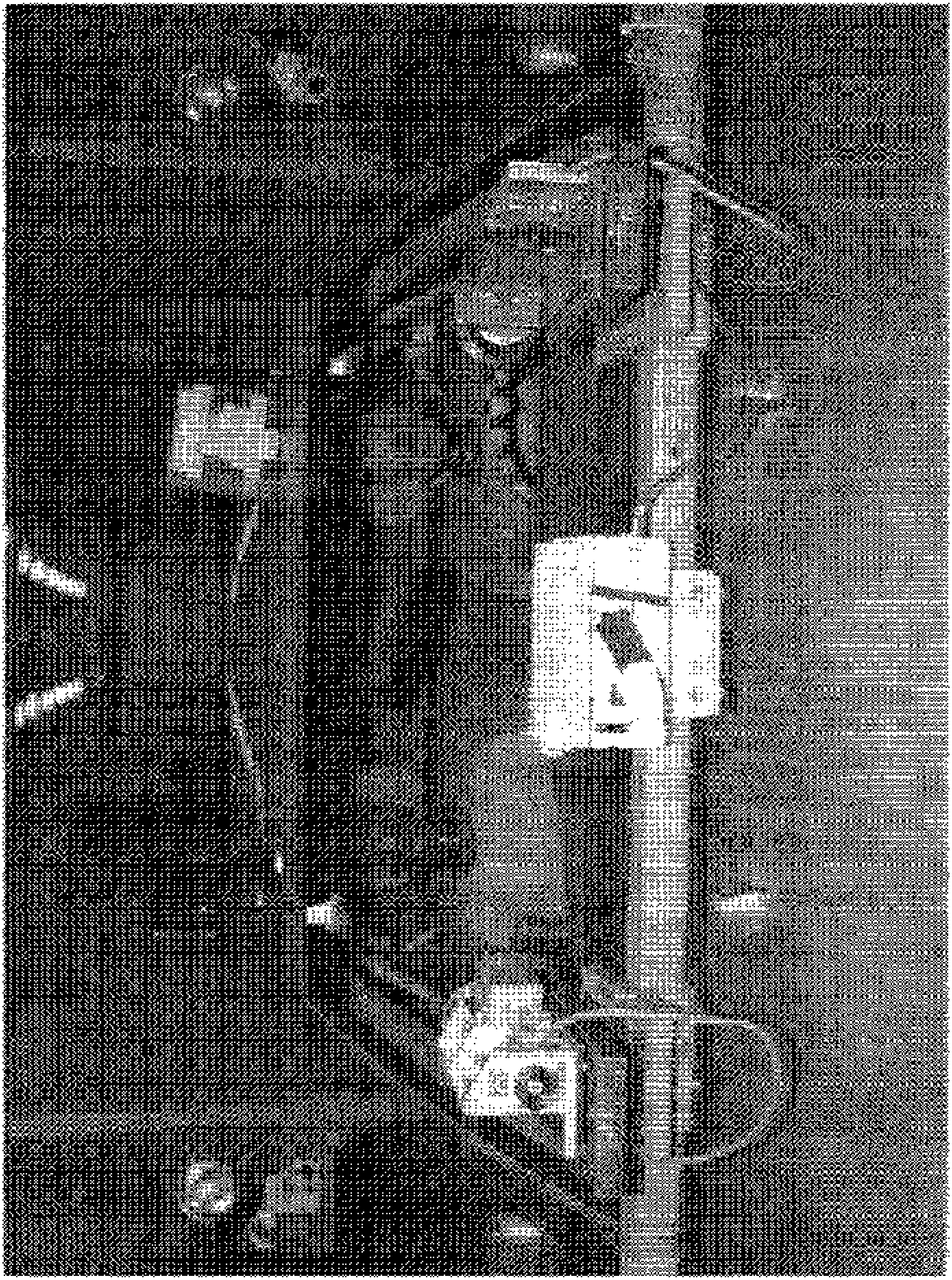


Figure A-7. Pre-Test Windshield View

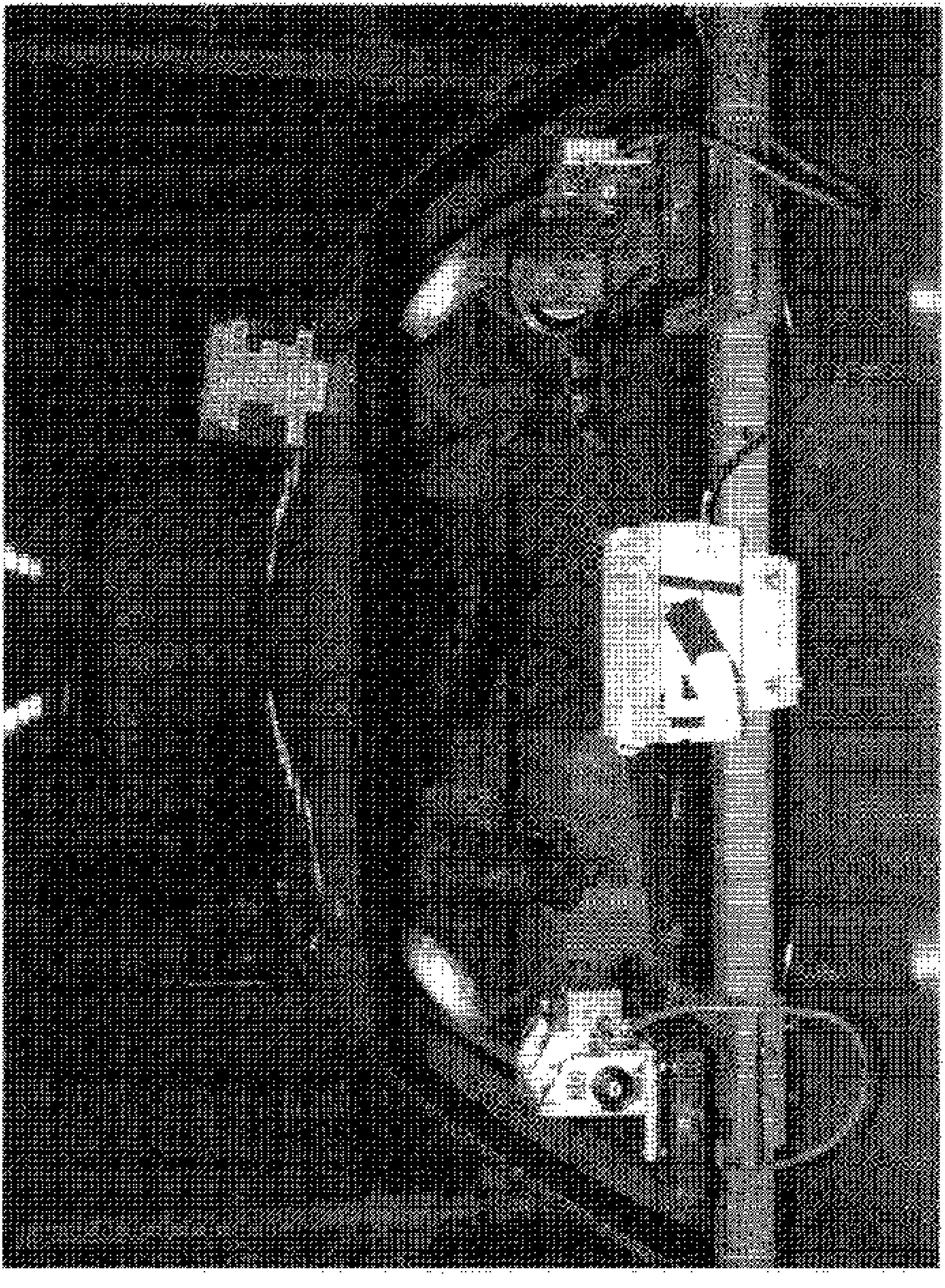


Figure A-8. Post-Test Windshield View

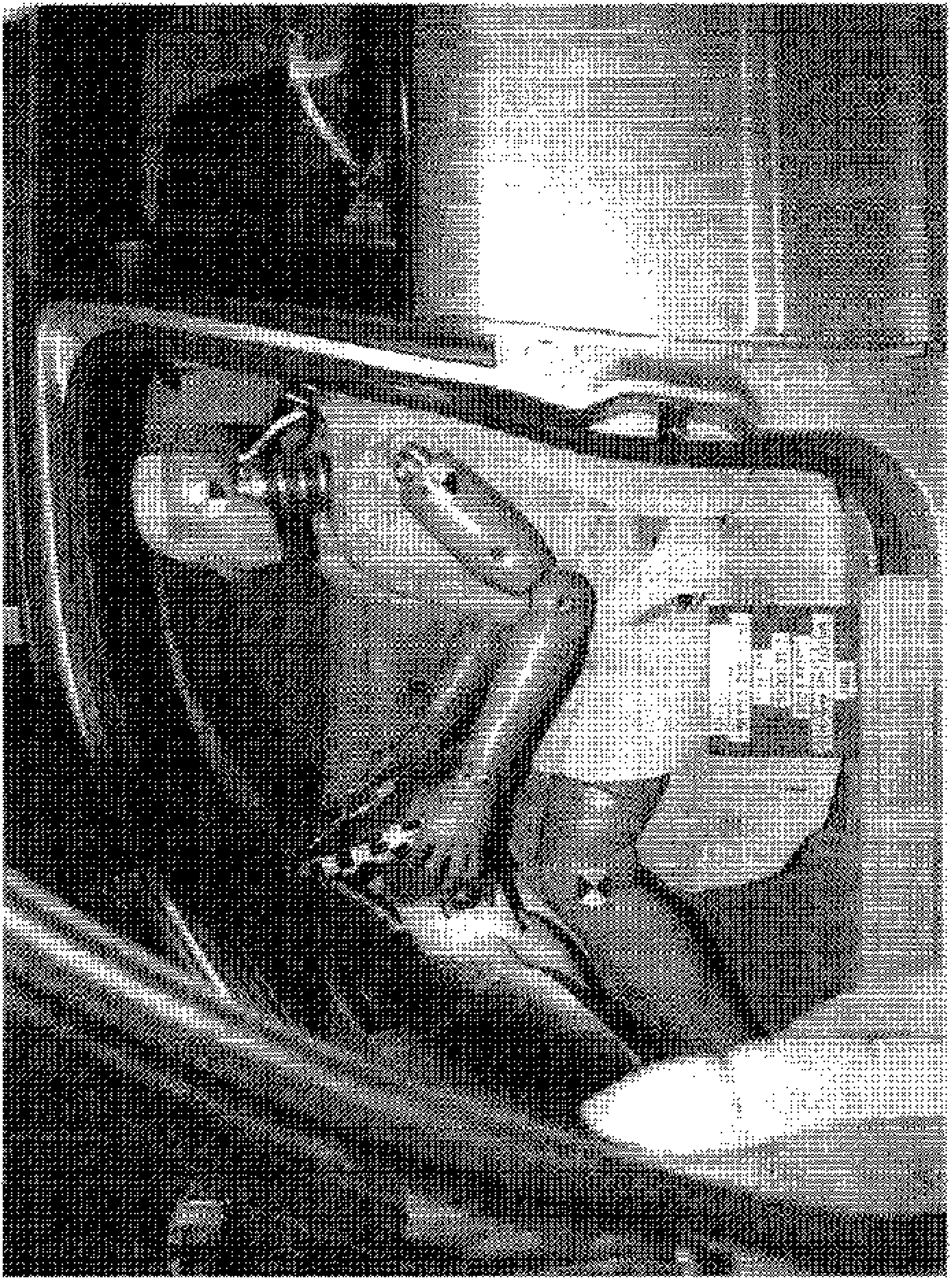


Figure A-9. Pre-Test Driver Dummy Position View with Door Open - View 1

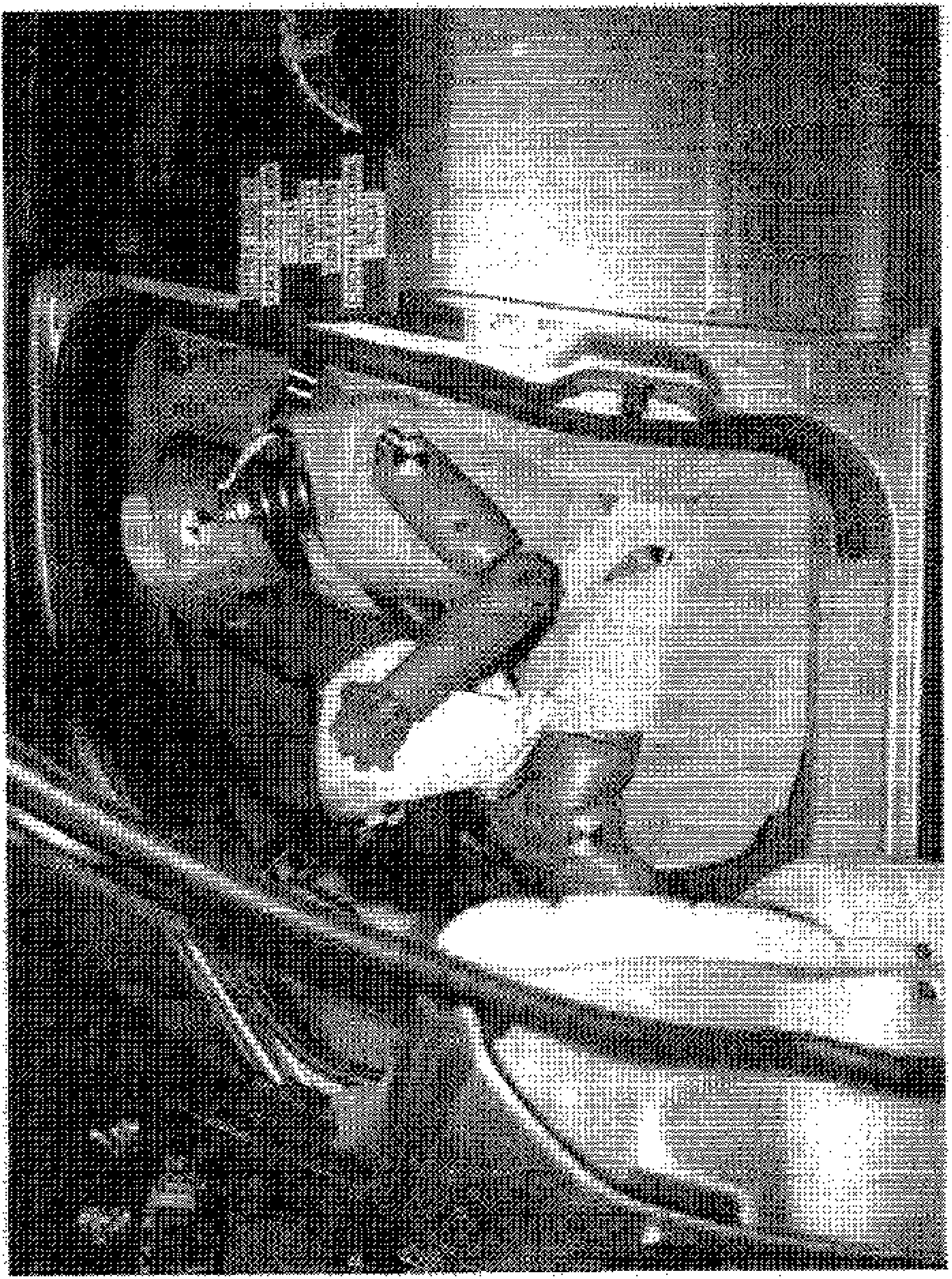


Figure A-10. Post-Test Driver Dummy Position View with Door Open - View 1

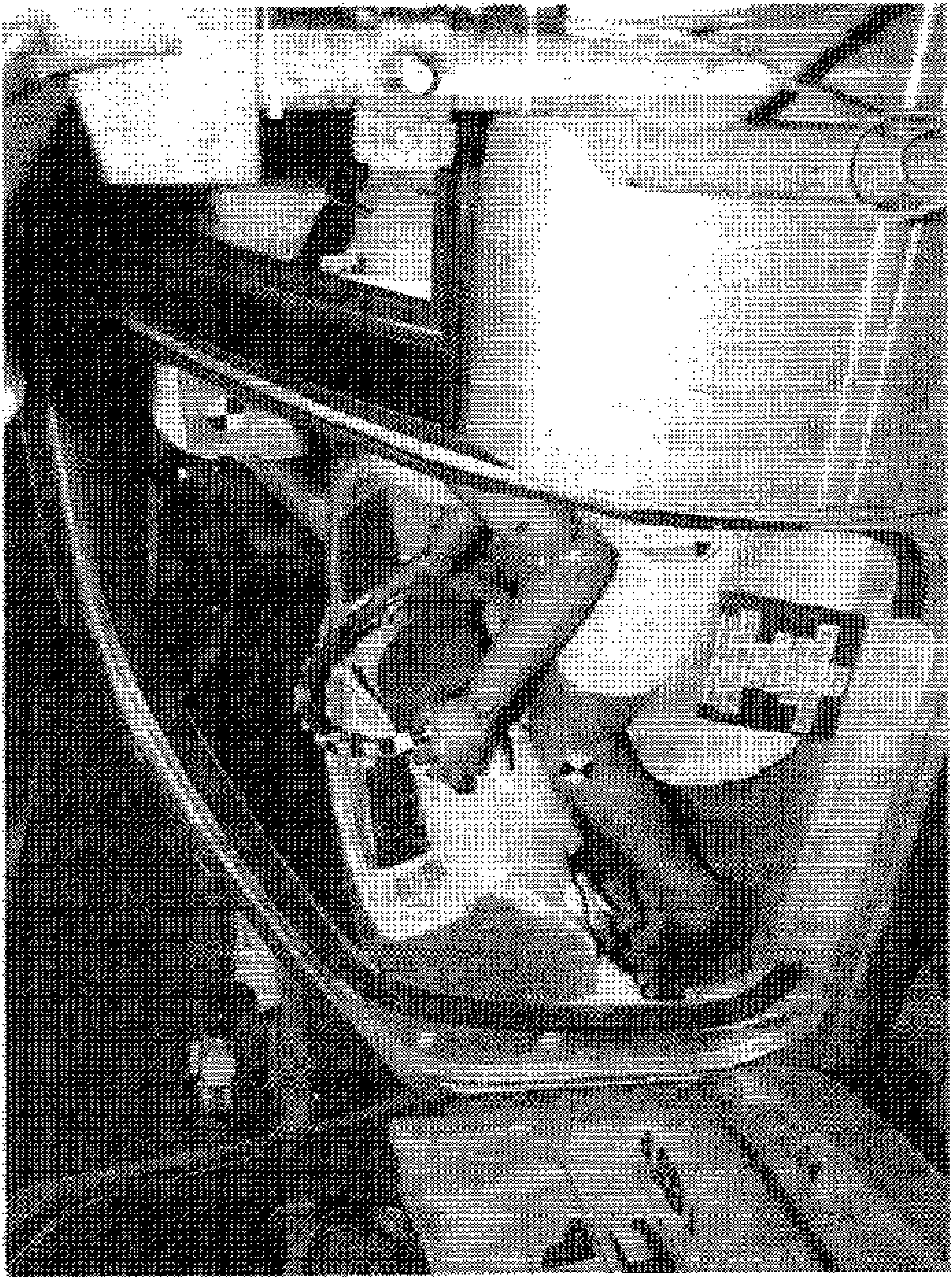


Figure A-11. Pre-Test Driver Dummy Position View with Door Open - View 2

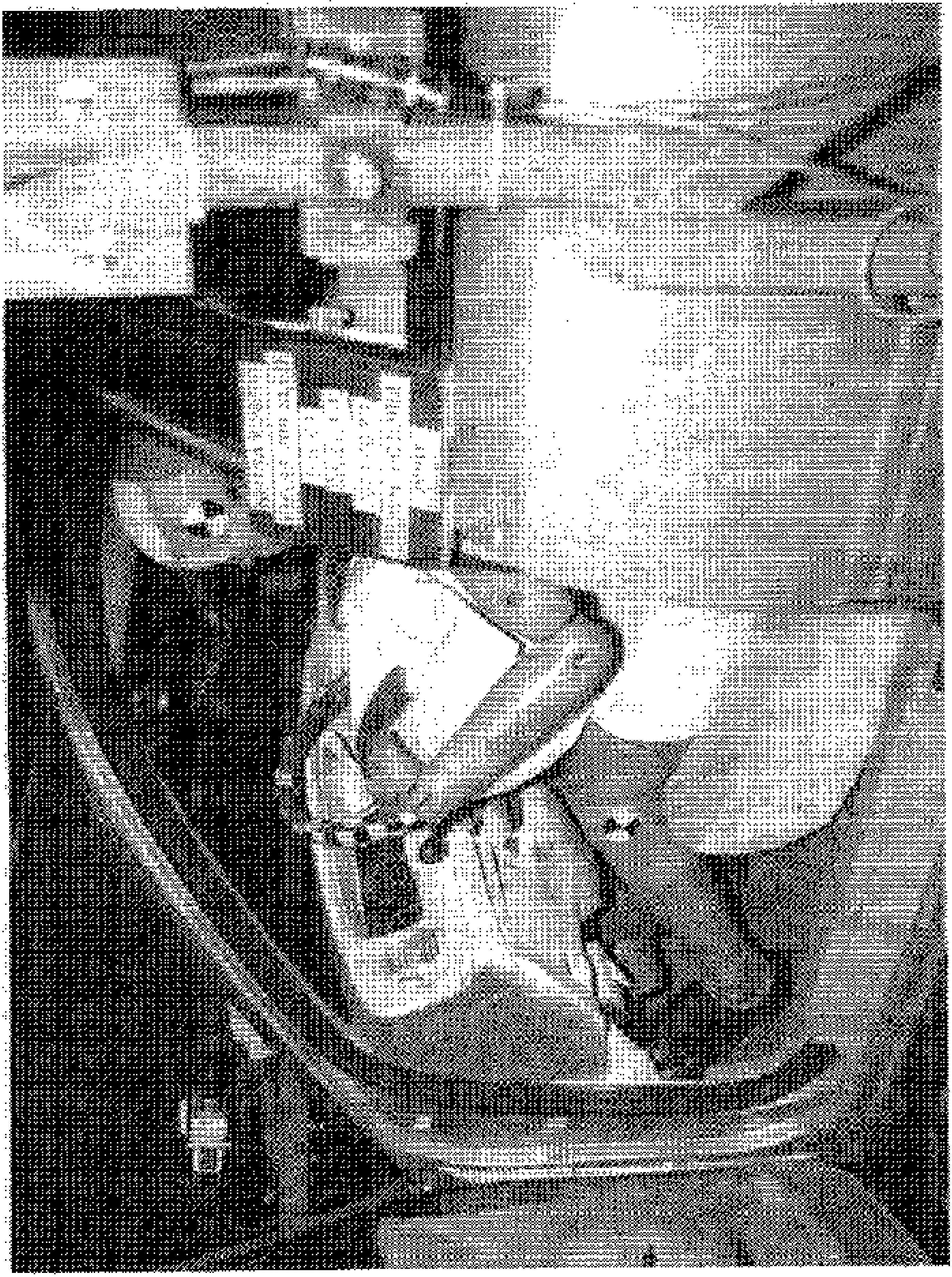


Figure A-12. Post-Test Driver Dummy Position View with Door Open - View 2

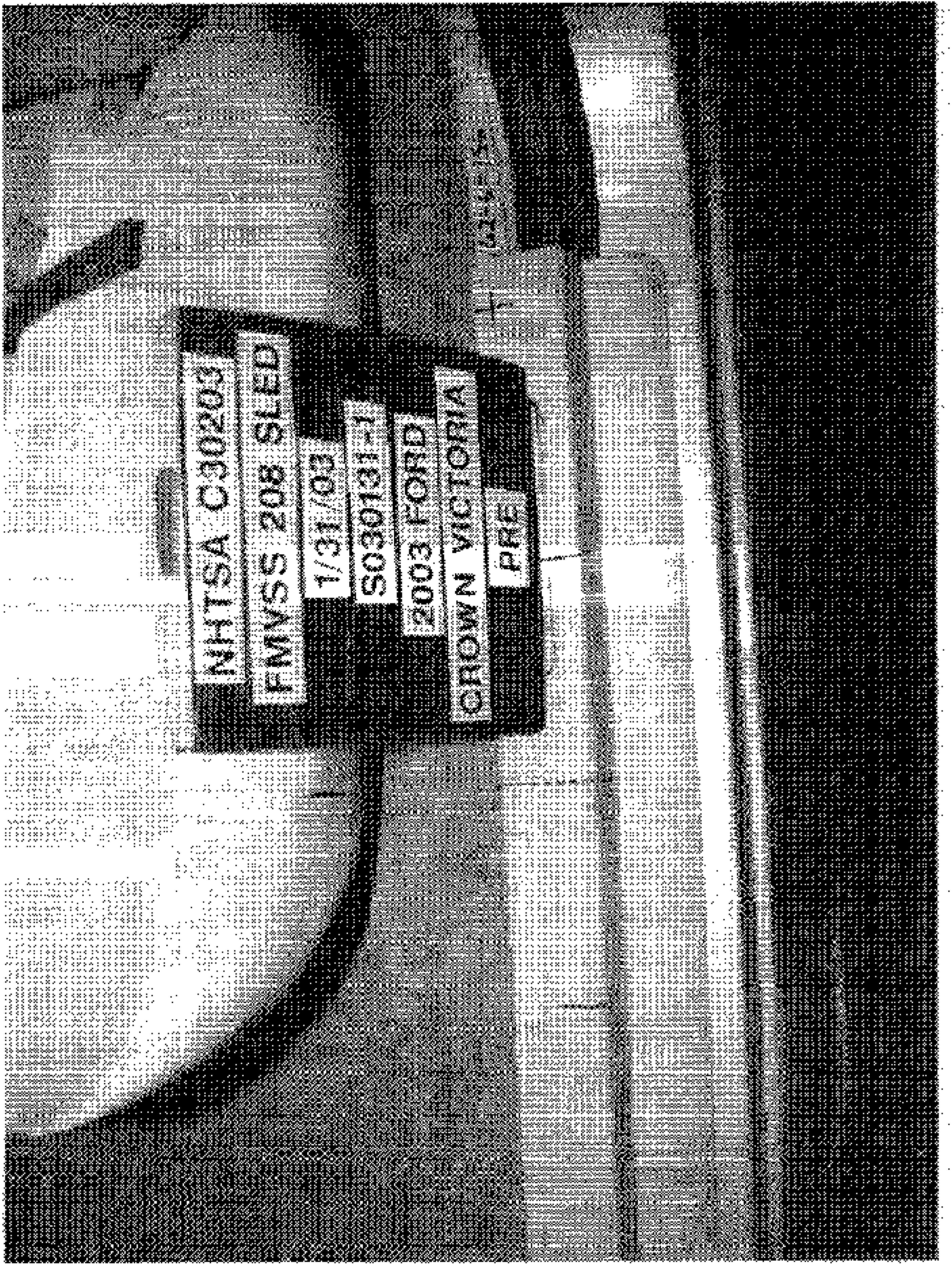


Figure A-13. Pre-Test Driver Seat Track Position View

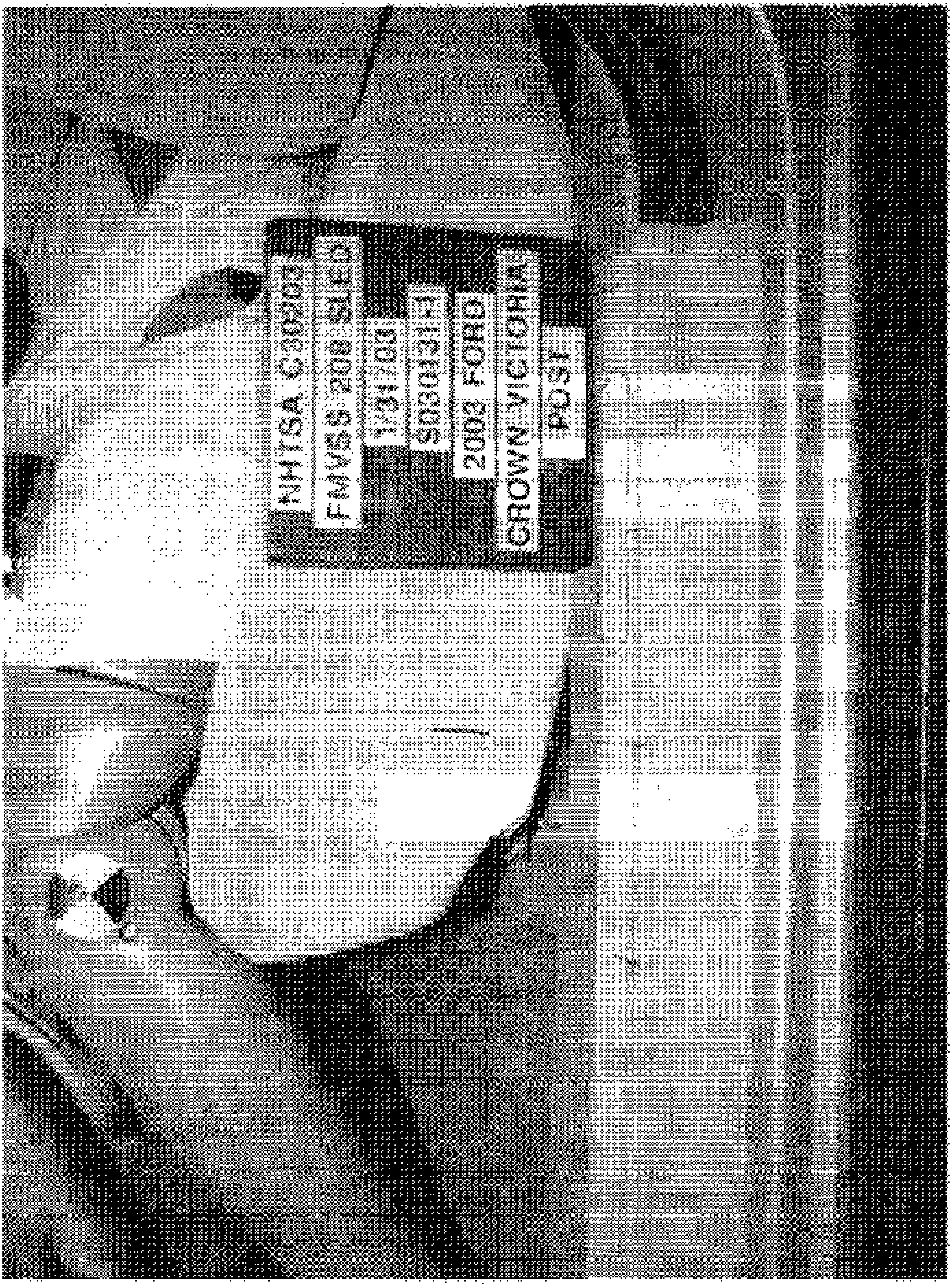


Figure A-14. Post-Test Driver Seat Track Position View

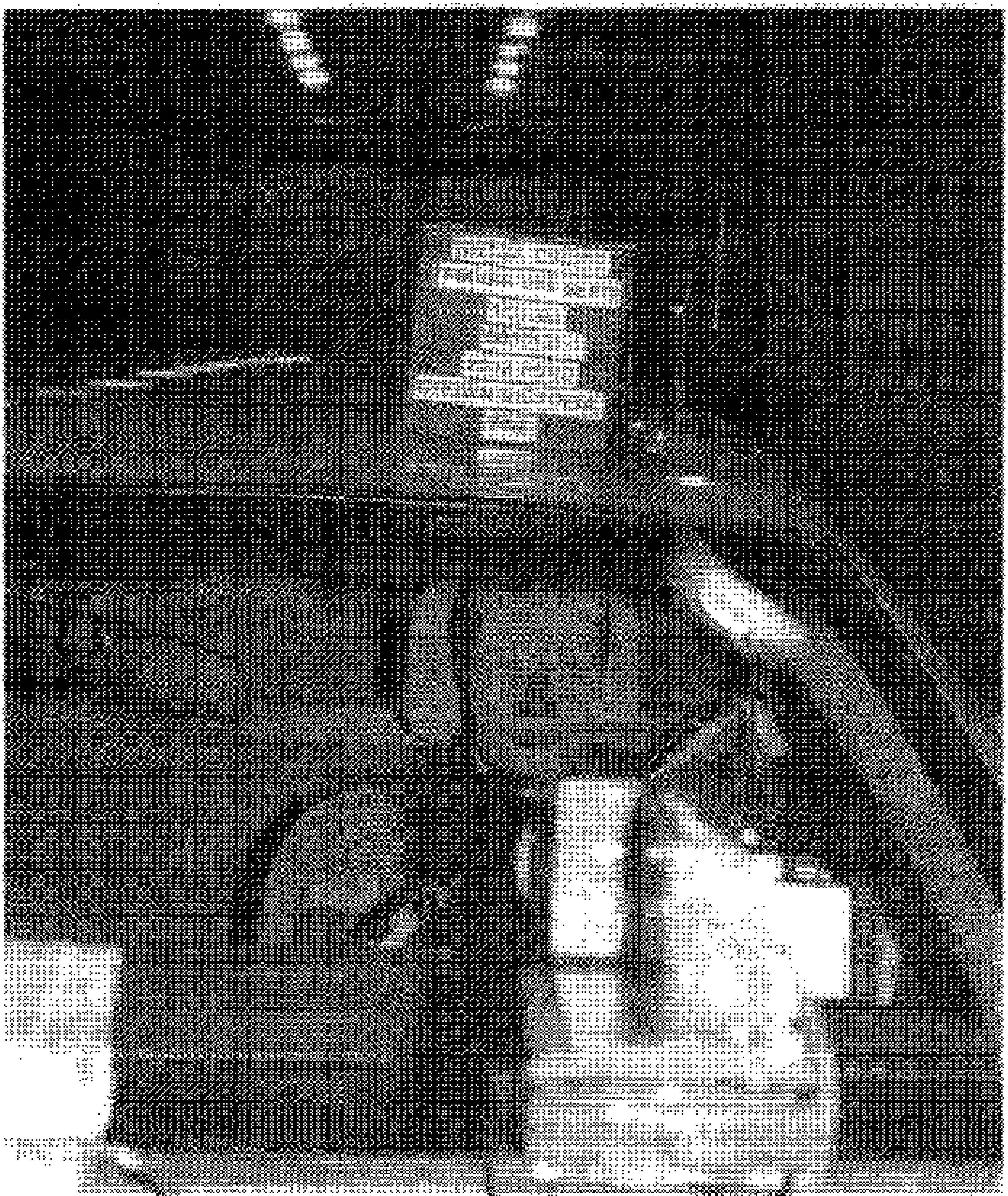


Figure A-15. Pre-Test Driver Dummy Position Front View

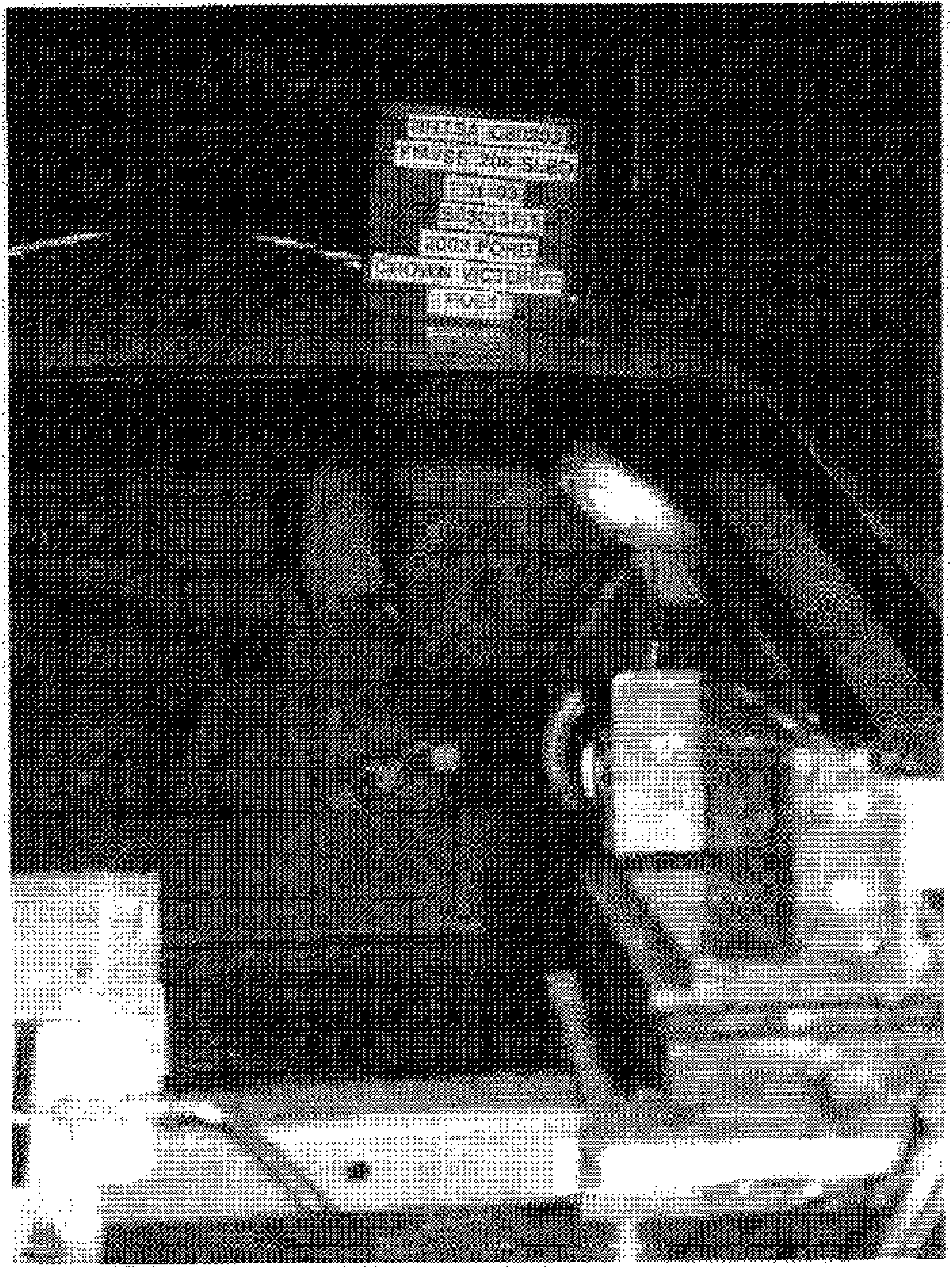


Figure A-16. Post-Test Driver Dummy Position Front View

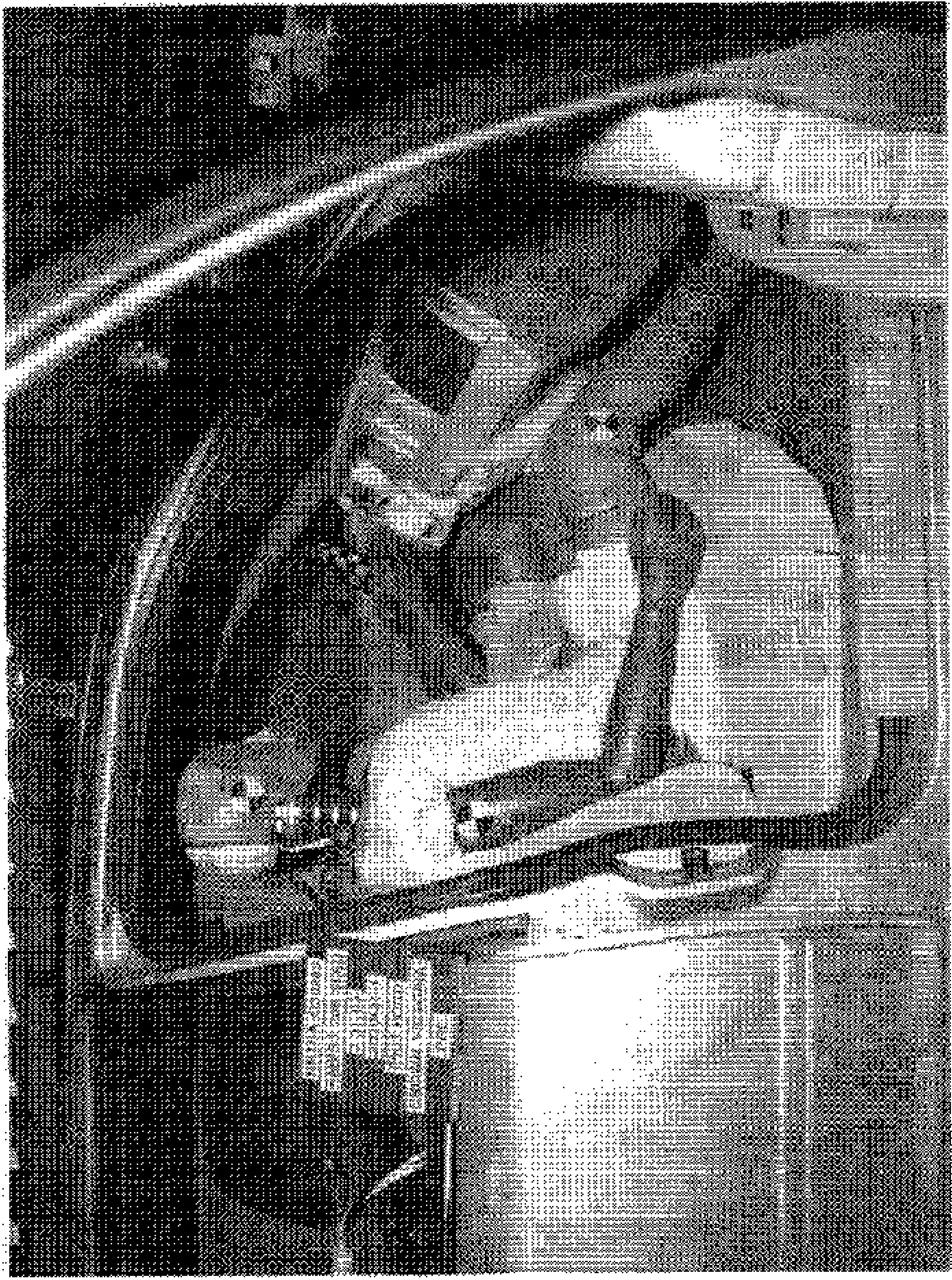


Figure A-17. Pre-Test Passenger Dummy Position View with Door Open - View 1

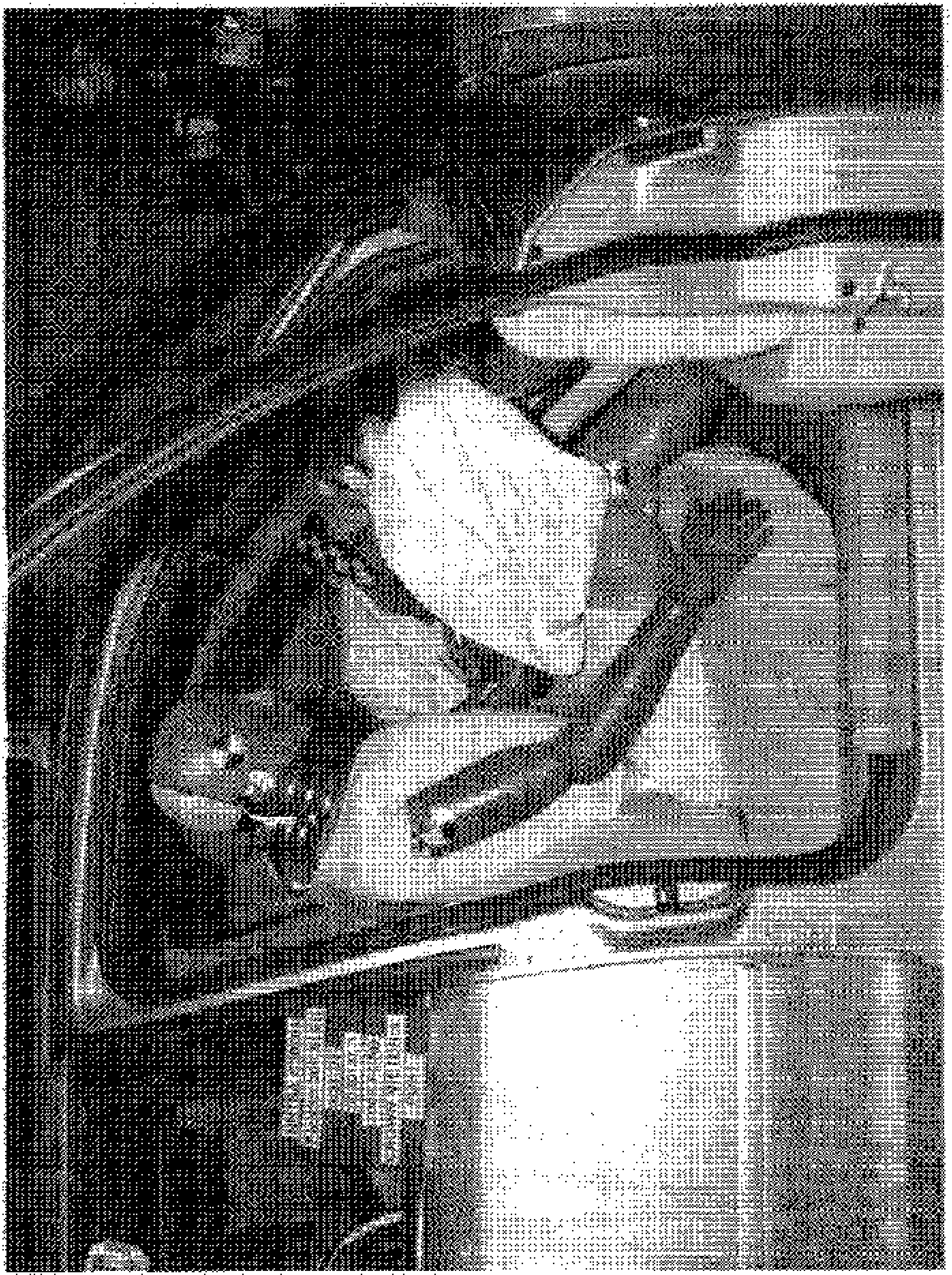


Figure A-18. Post-Test Passenger Dummy Position View with Door Open - View 1

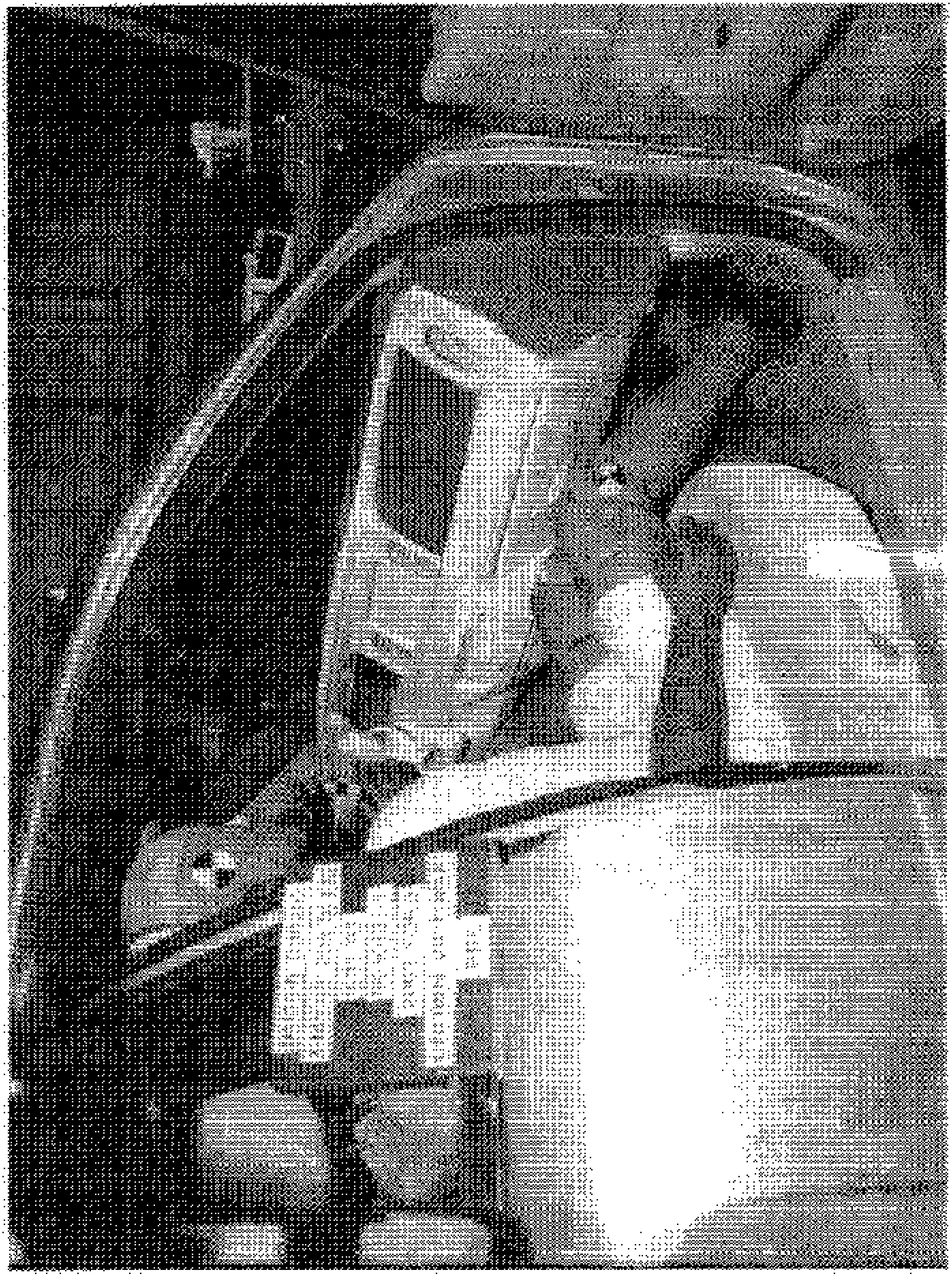


Figure A-19. Pre-Test Passenger Dummy Position View with Door Open - View 2

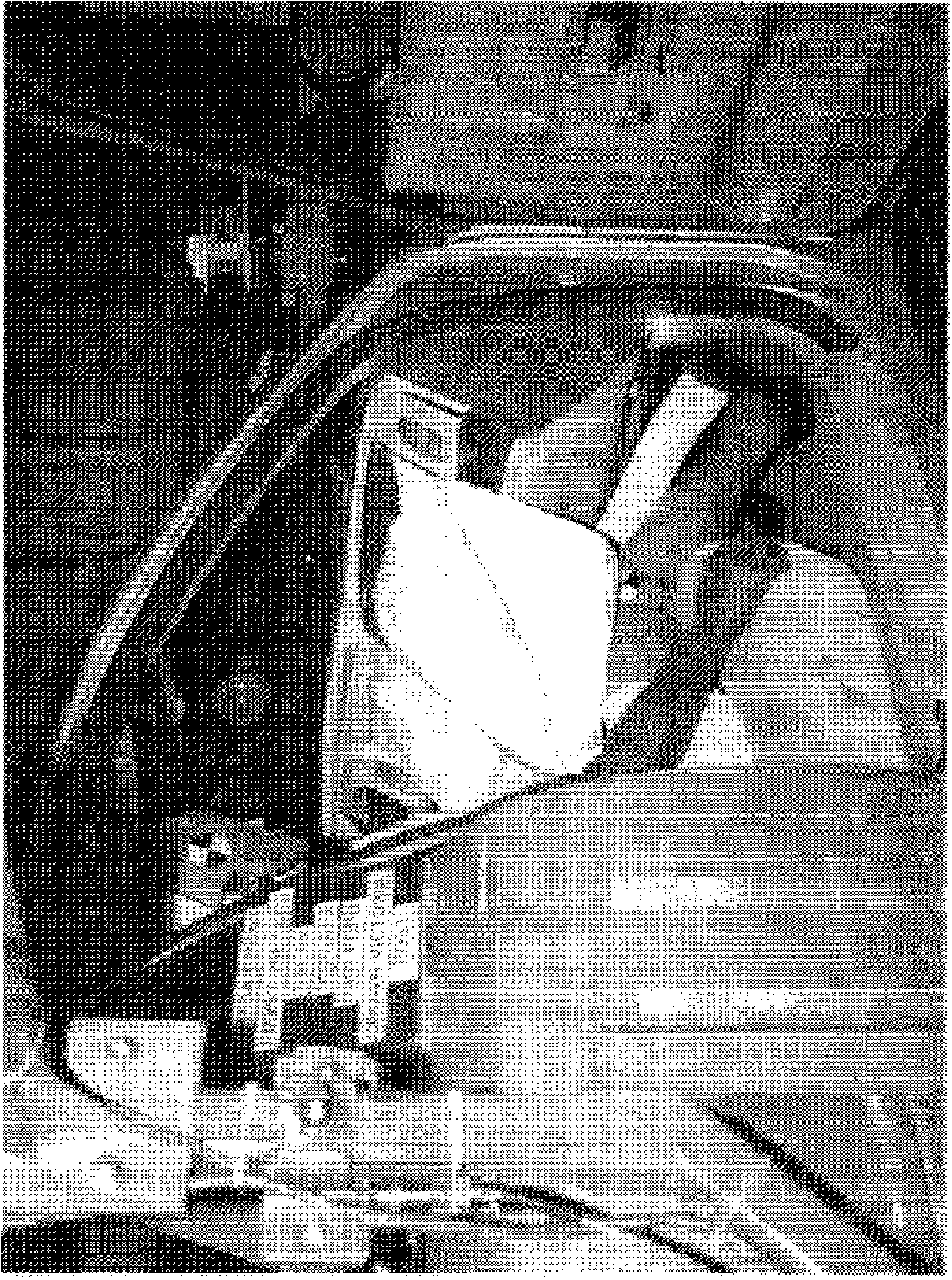


Figure A-20. Post-Test Passenger Dummy Position View with Door Open - View 2

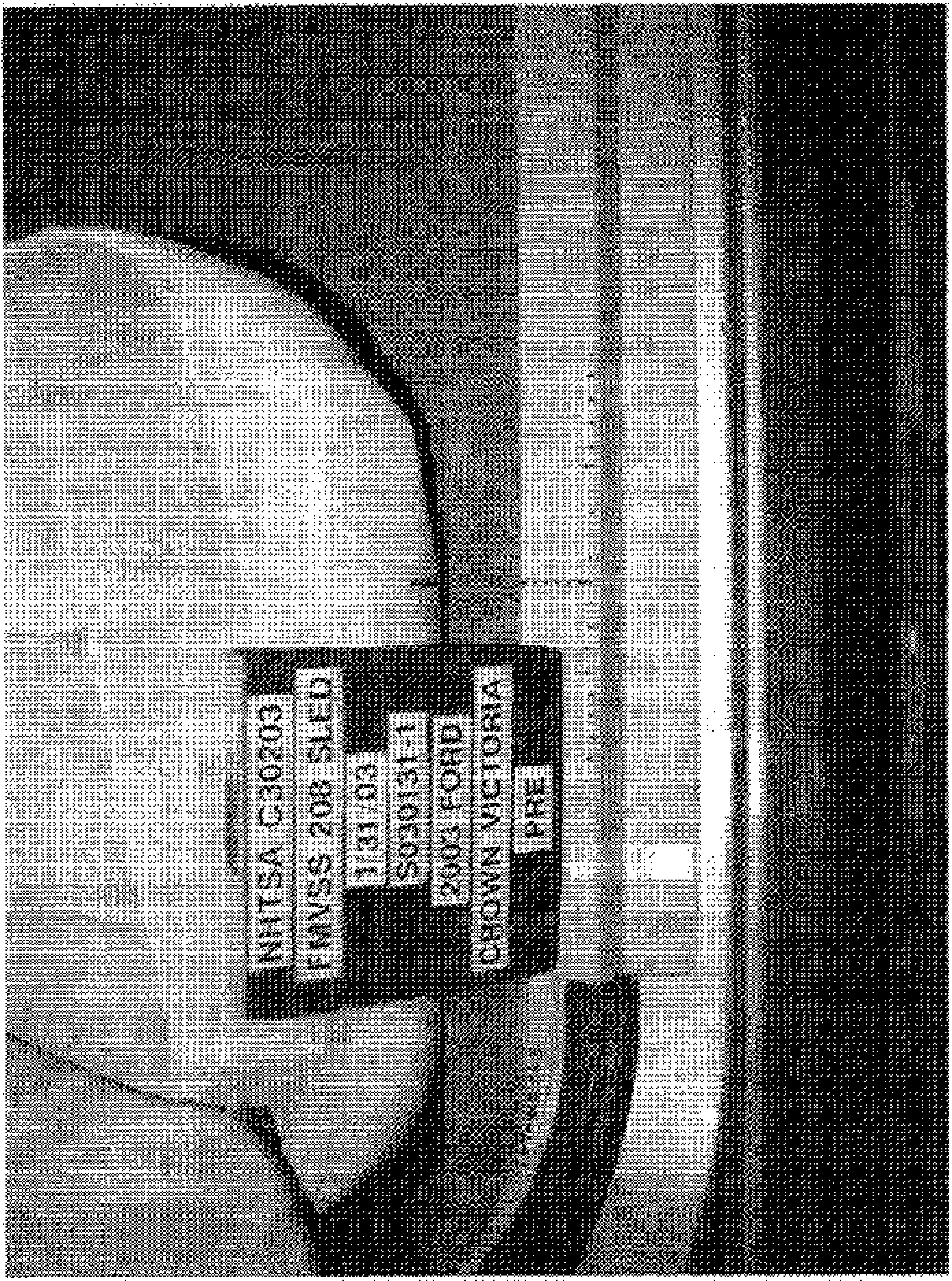


Figure A-21. Pre-Test Passenger Seat Track Position View

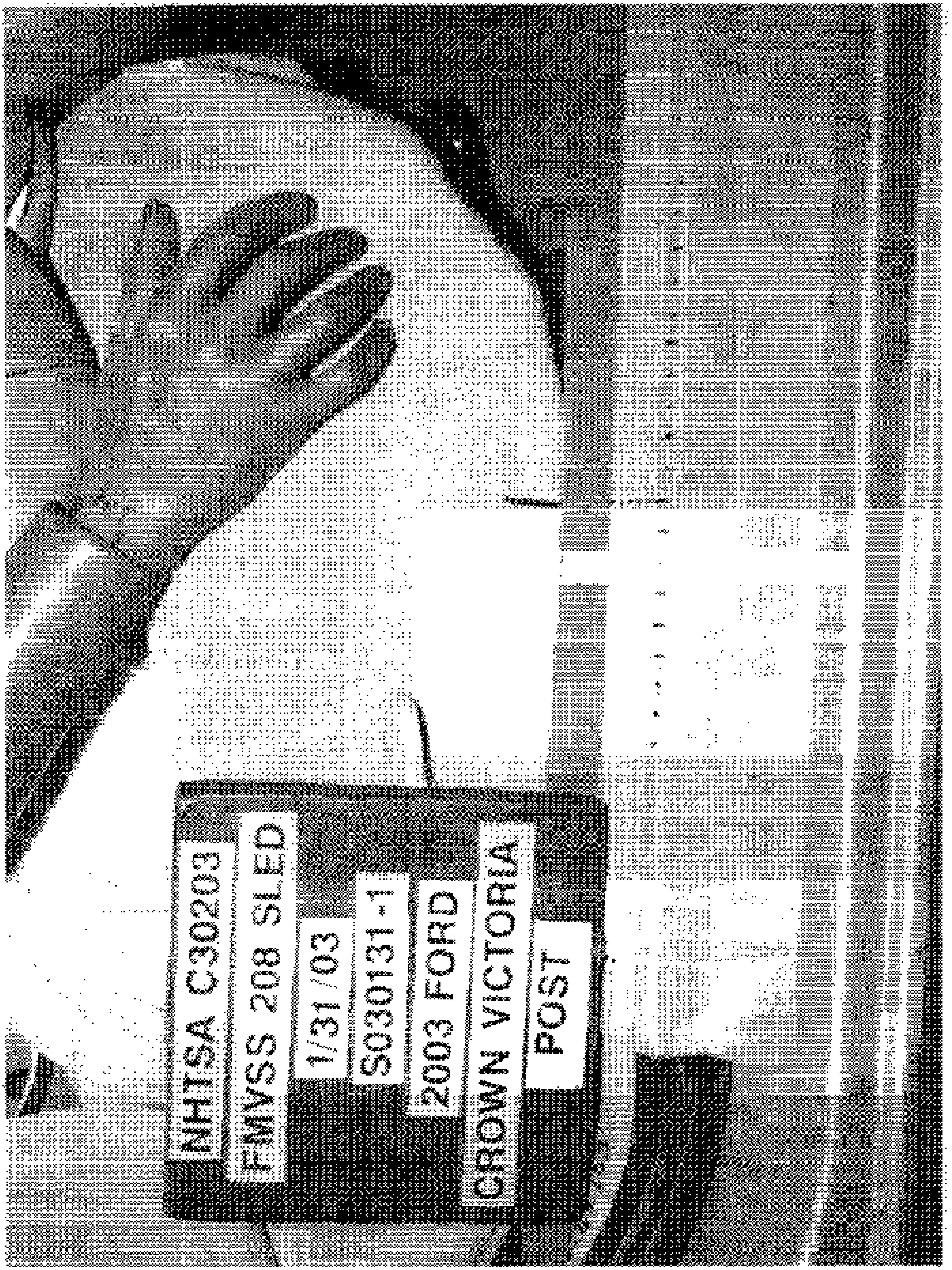


Figure A-22. Post-Test Passenger Seat Track Position View

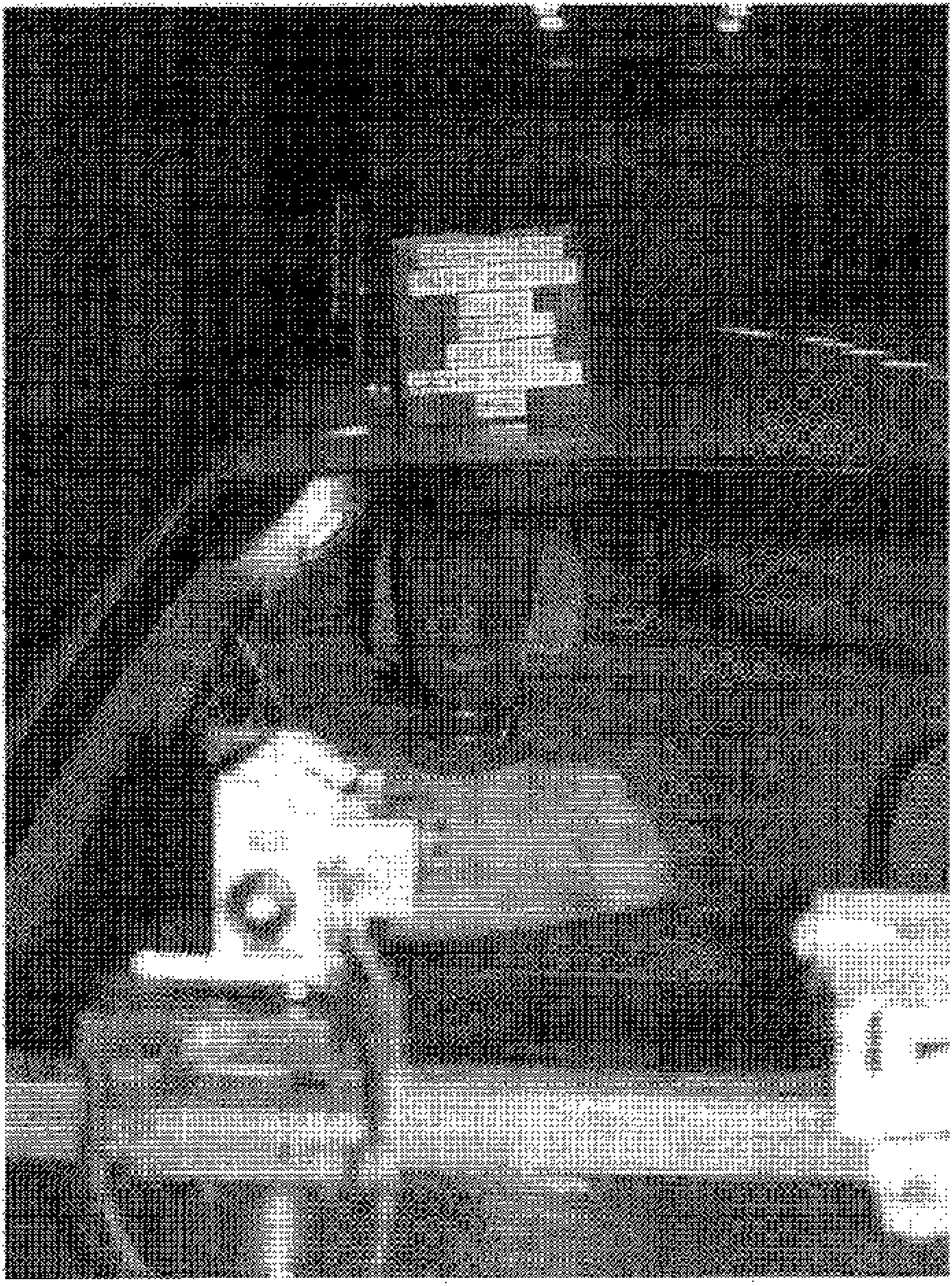


Figure A-23. Pre-Test Passenger Dummy Position Front View

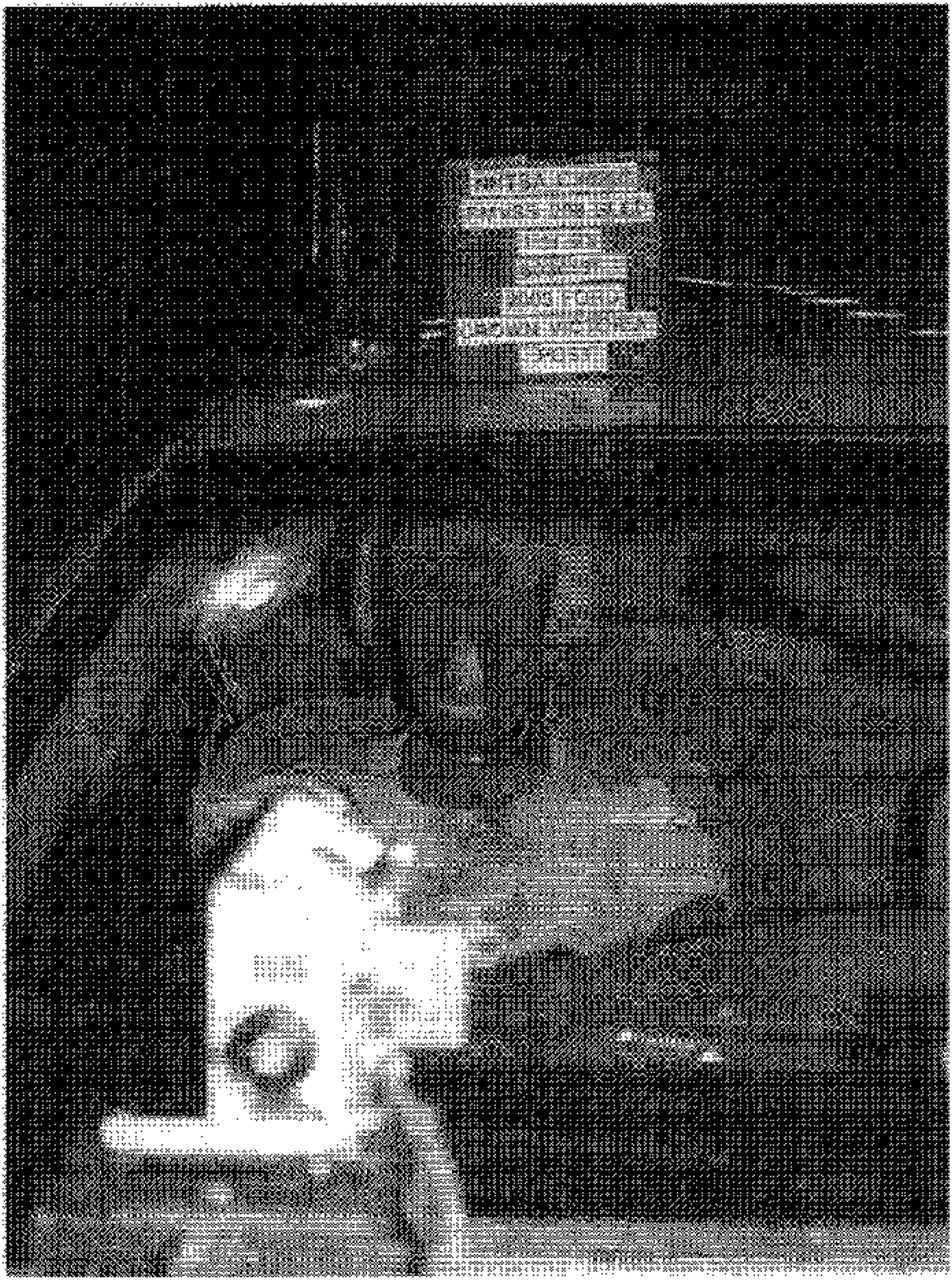


Figure A-24. Post-Test Passenger Dummy Position Front View

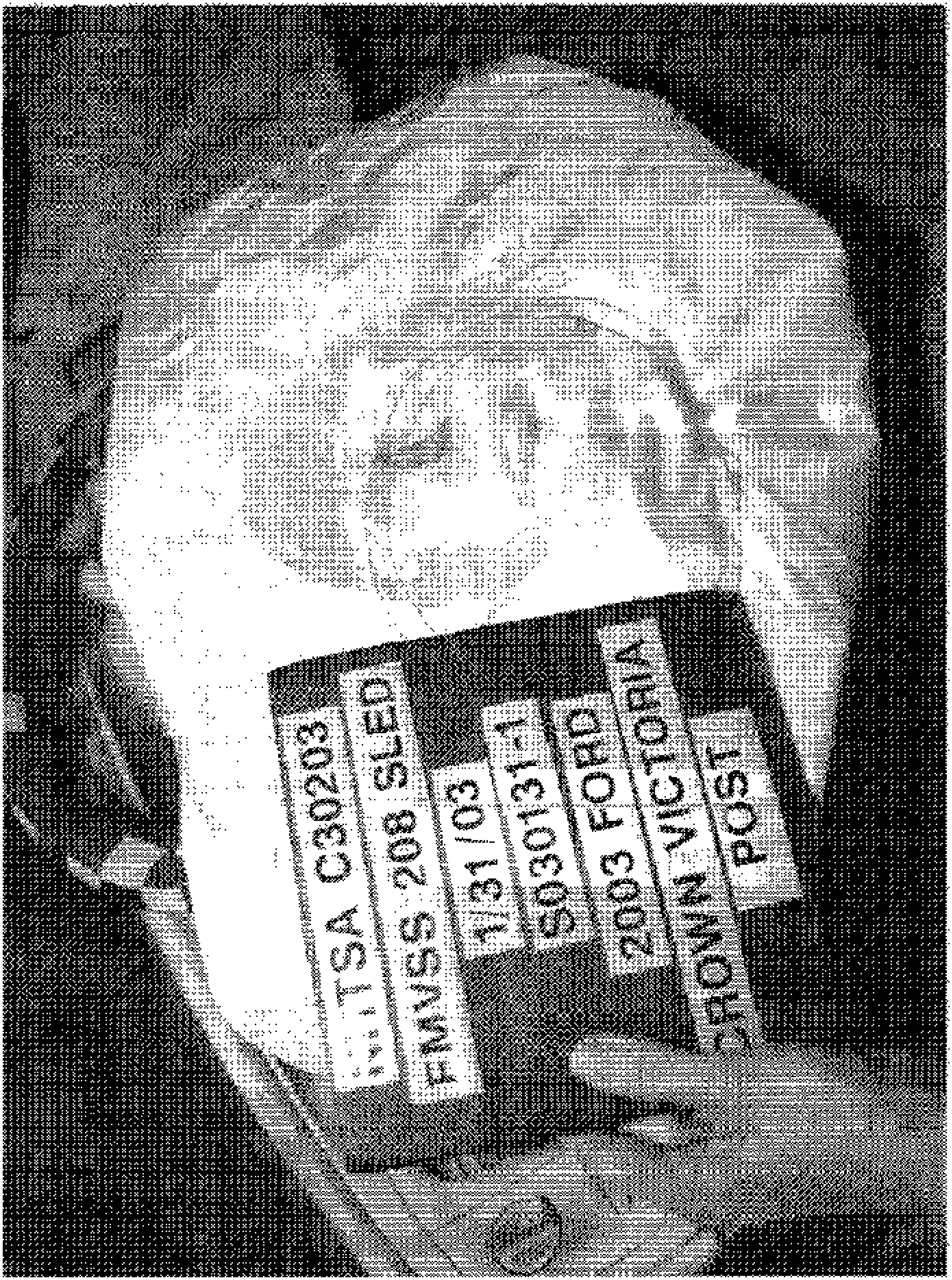


Figure A-25. Post-Test Driver Airbag View

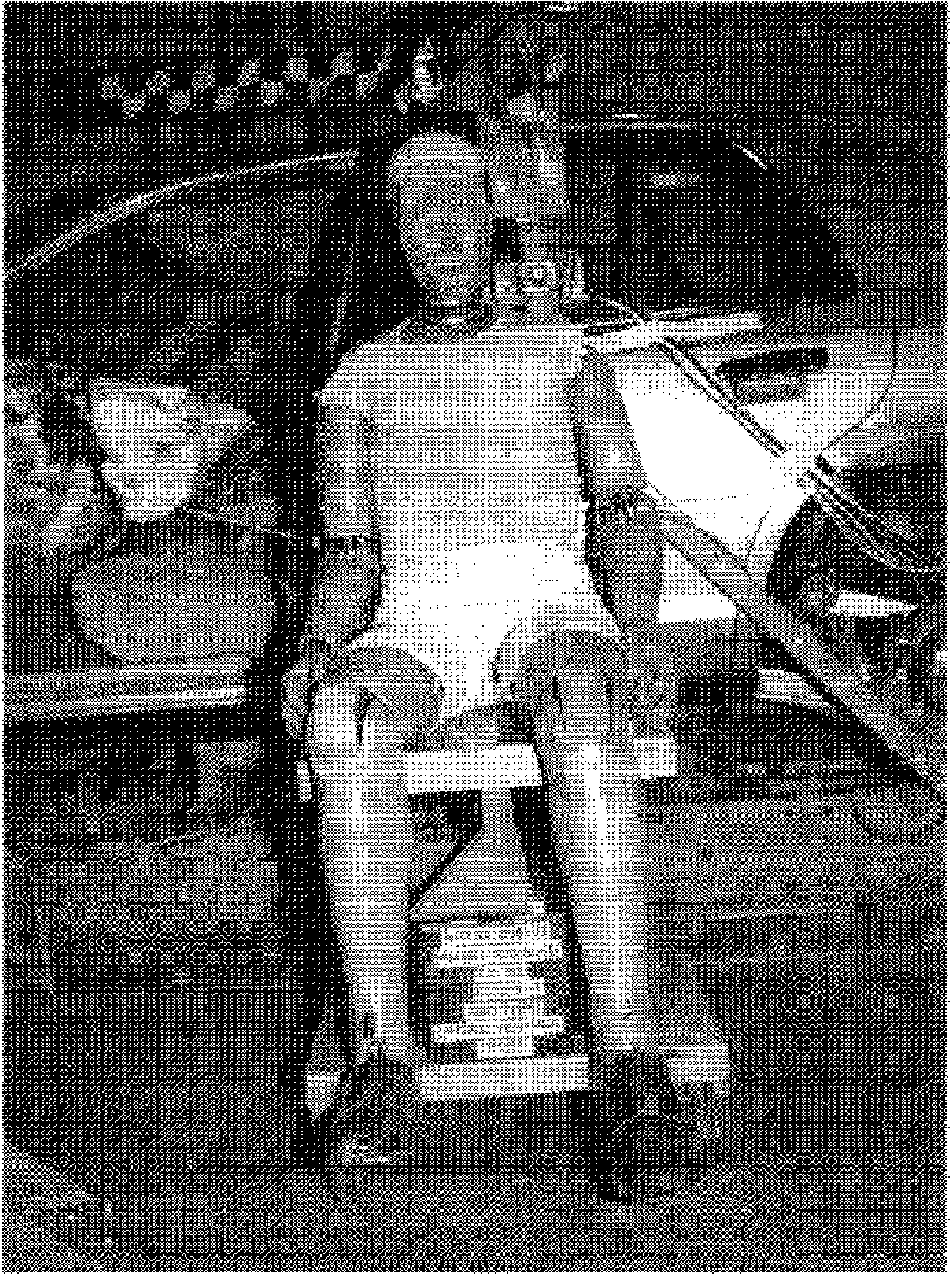


Figure A-26. Post-Test Driver Dummy Removed from Vehicle Overall View

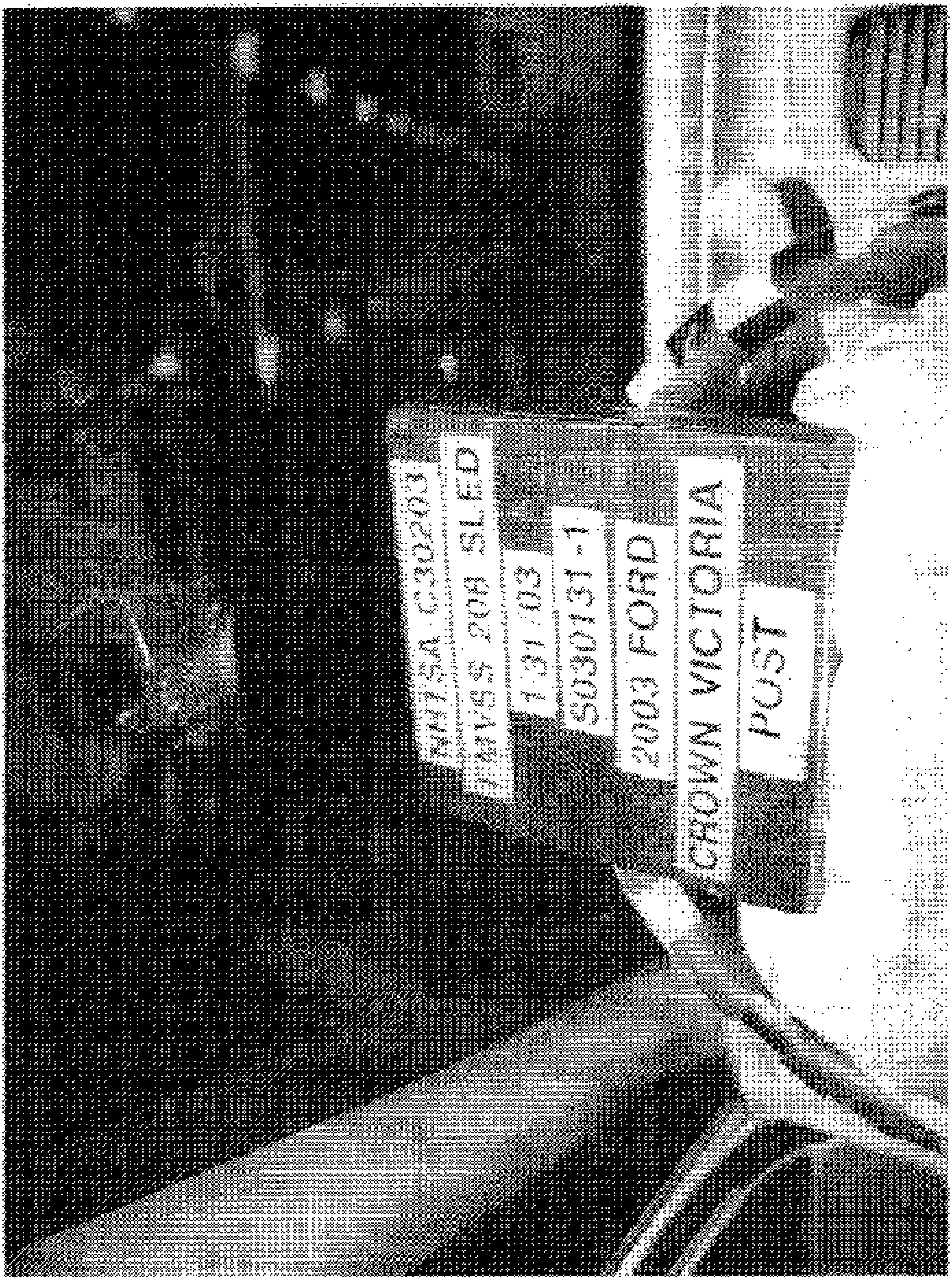


Figure A-27. Post-Test Driver Head Contact - View 1

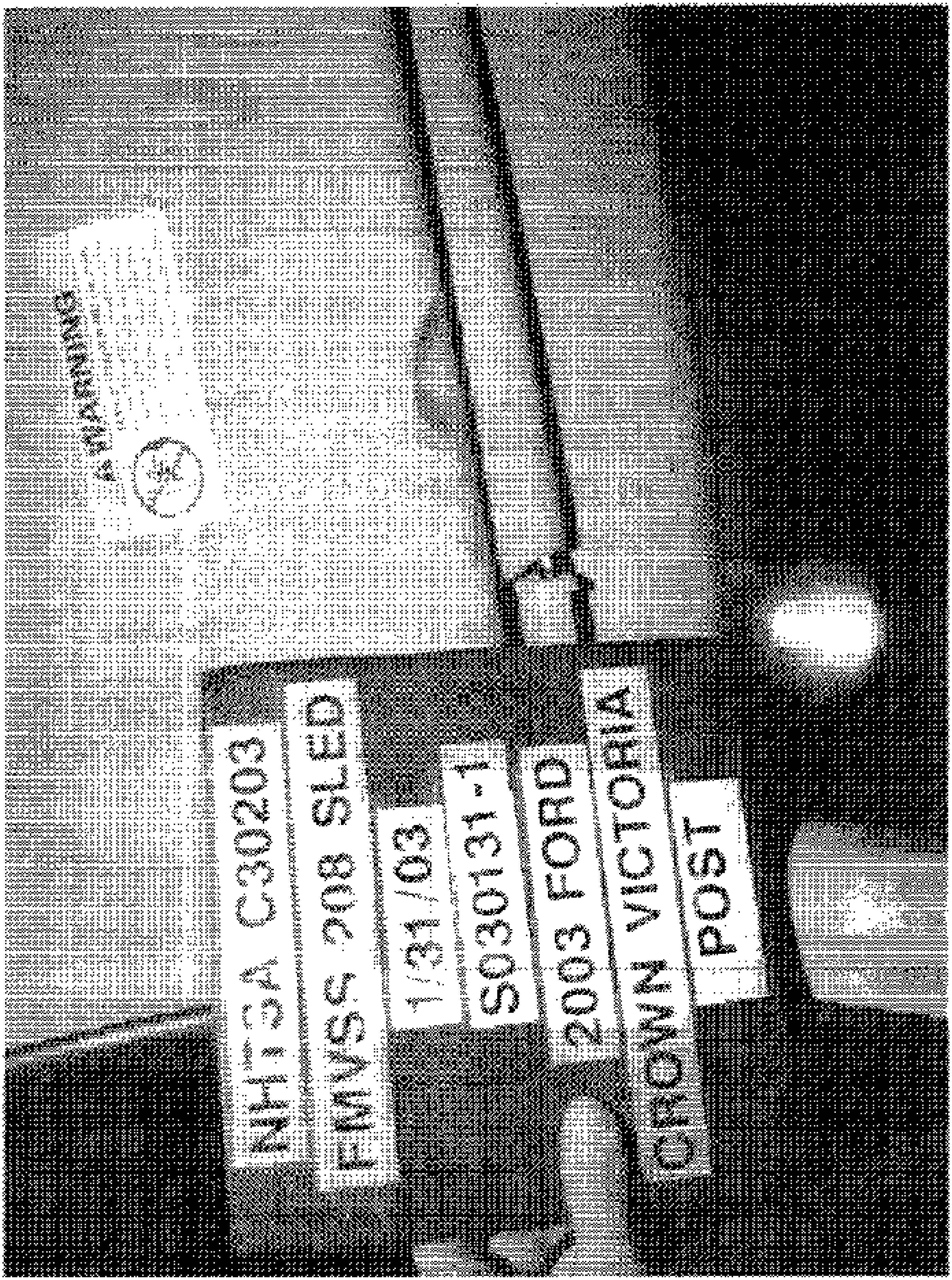


Figure A-28. Post-Test Driver Head Contact - View 2

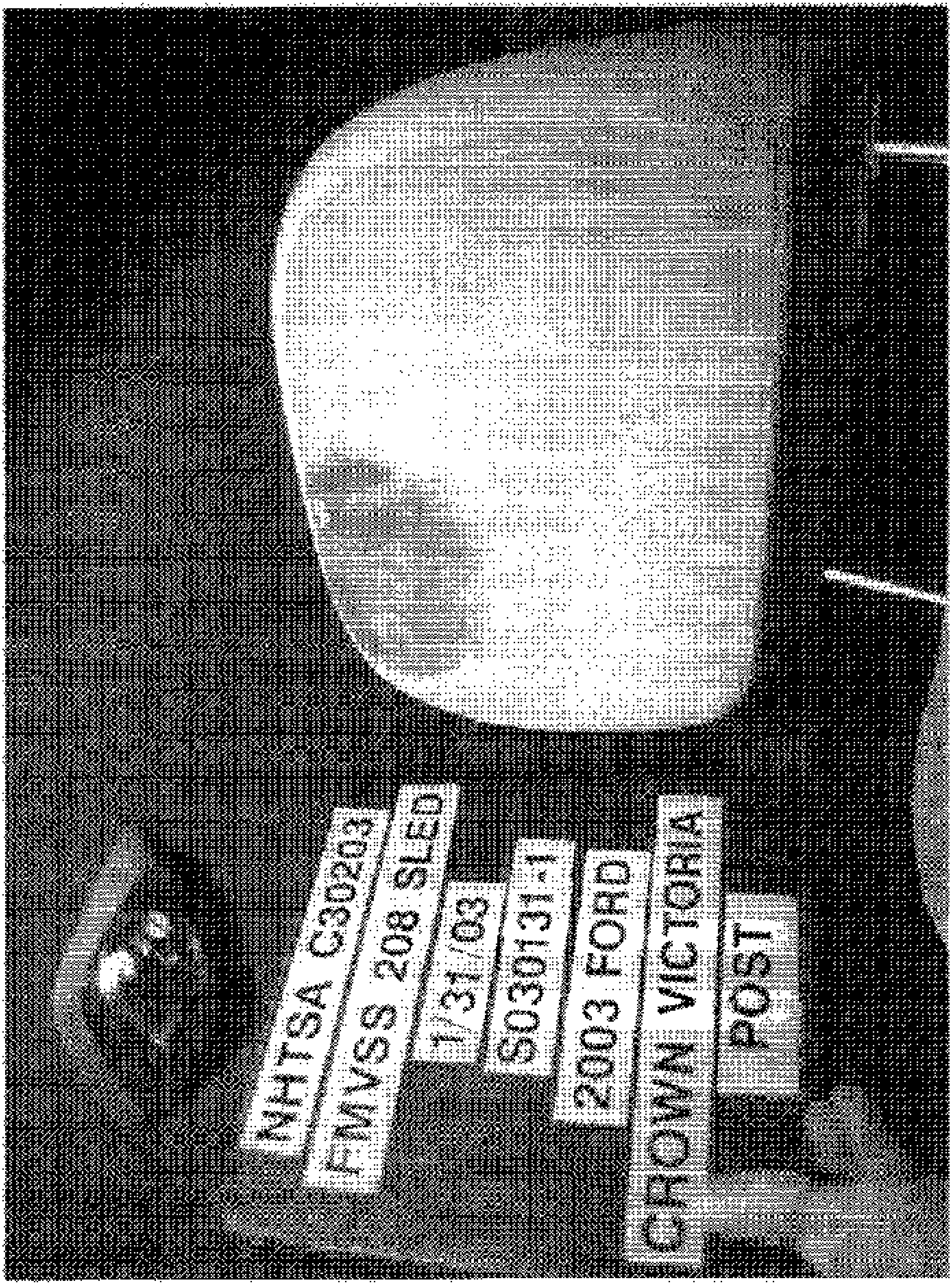


Figure A-29. Post-Test Driver Head Contact - View 3

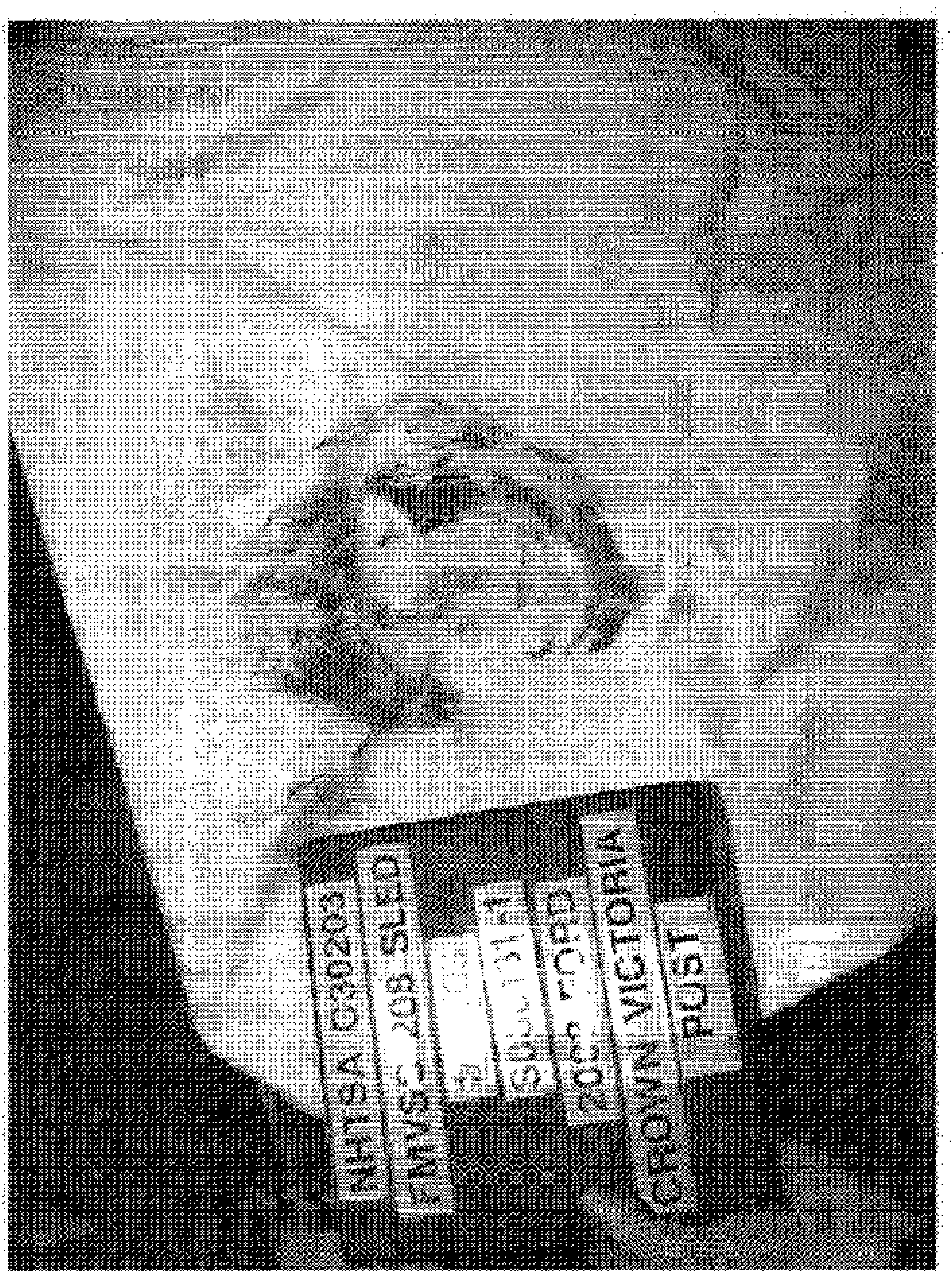


Figure A-30. Post-Test Passenger Airbag View

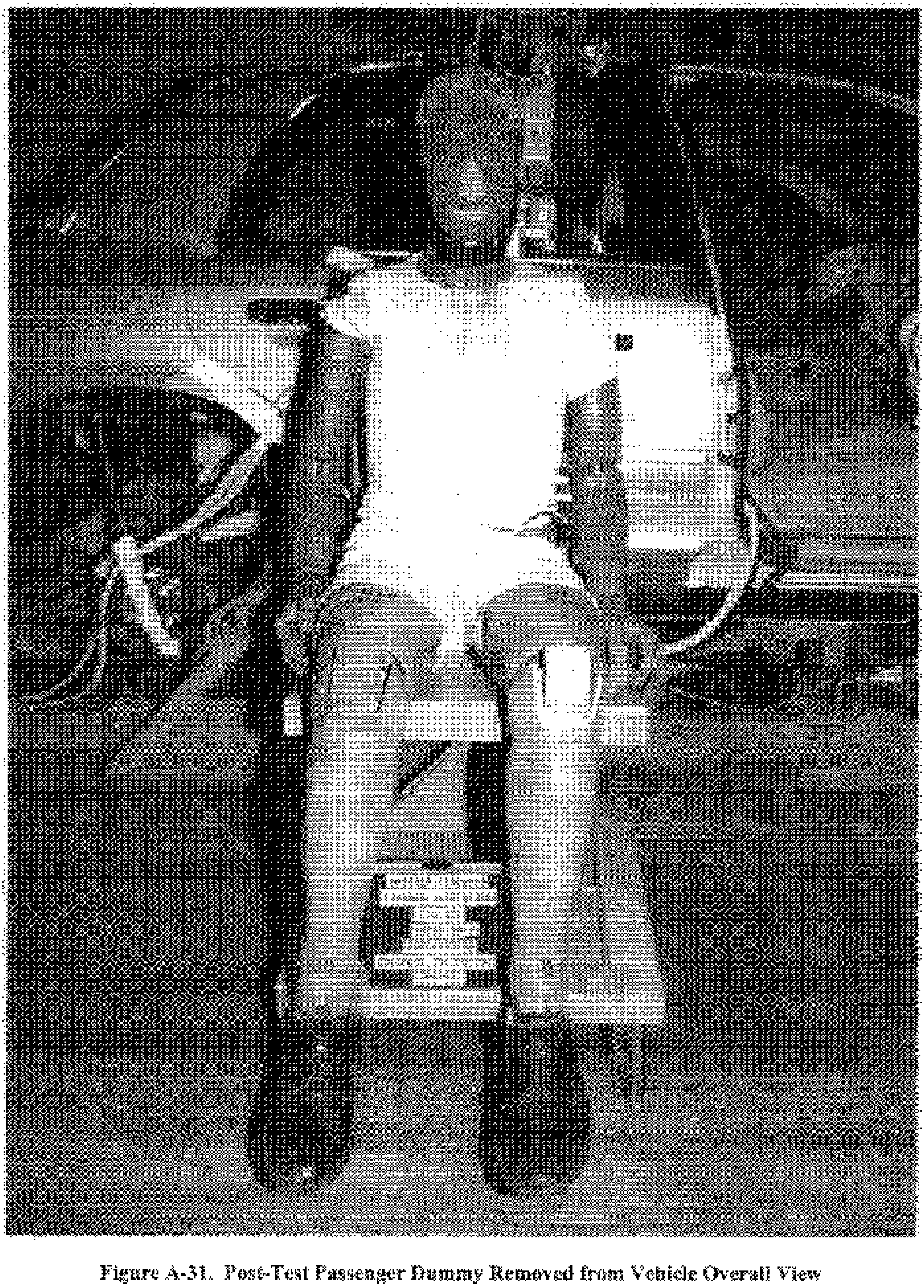


Figure A-31. Post-Test Passenger Dummy Removed from Vehicle Overall View

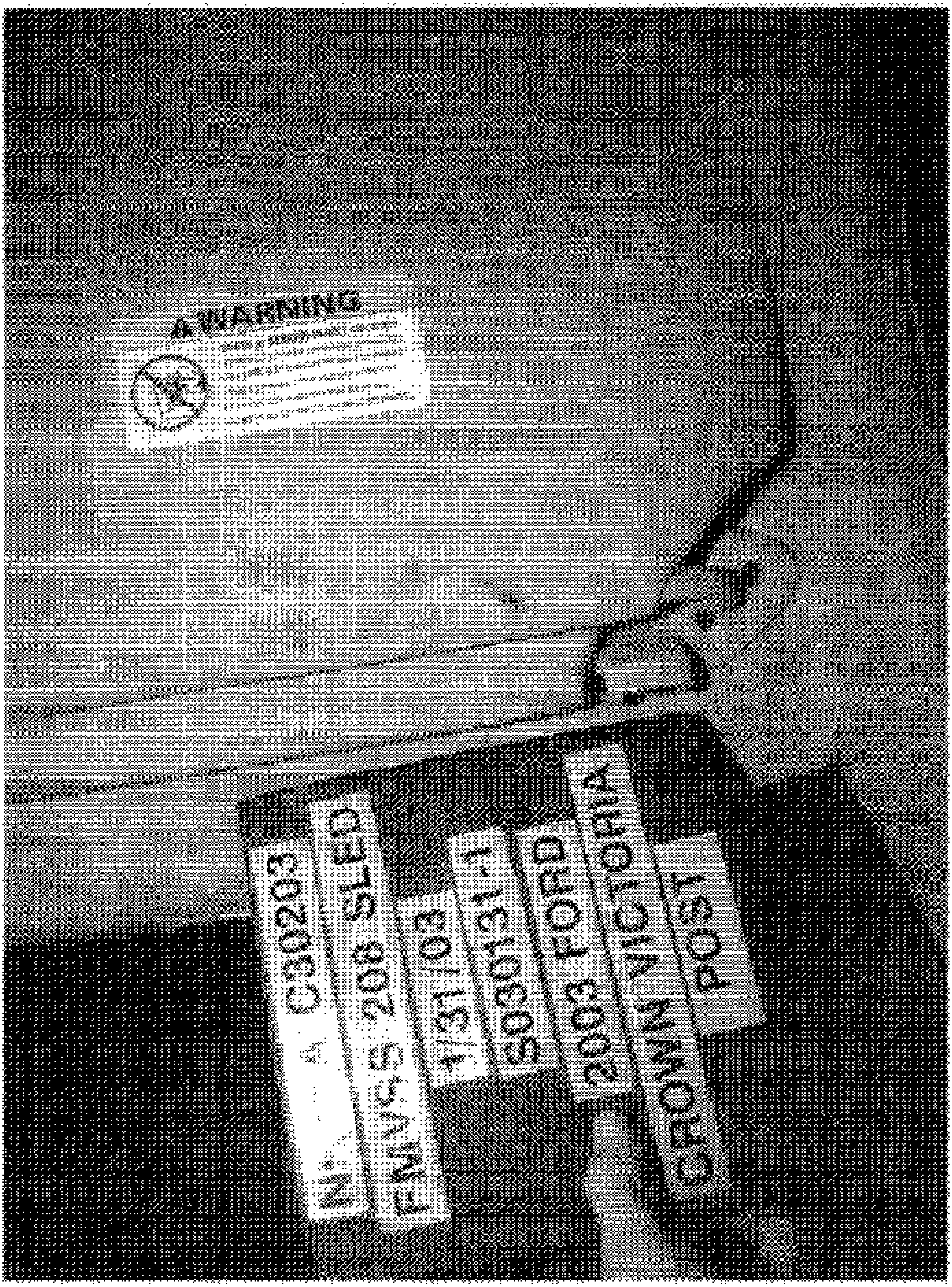


Figure A-32. Post-Test Passenger Head Contact View

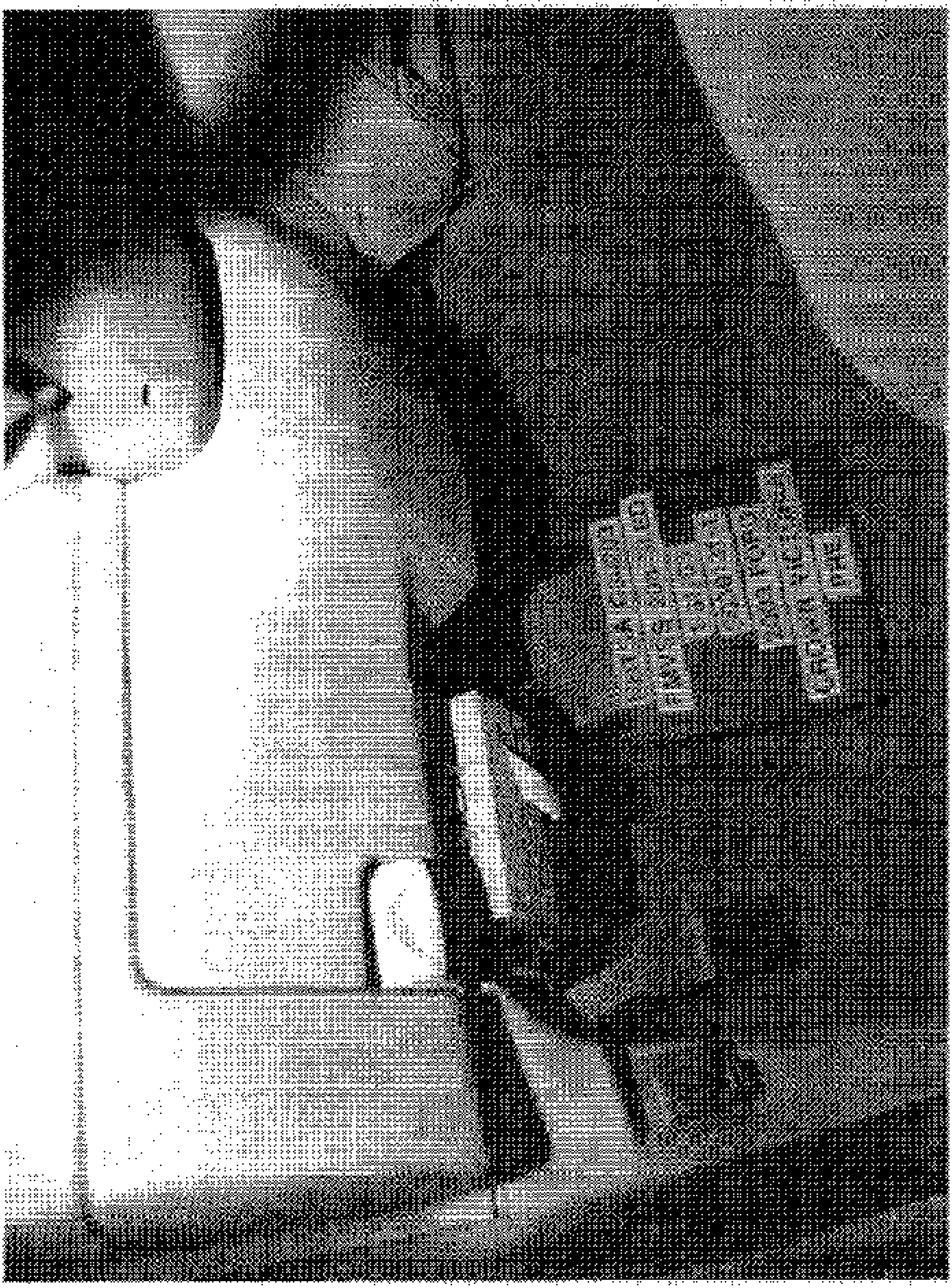


Figure A-33. Pre-Test Driver Knee Bolster View

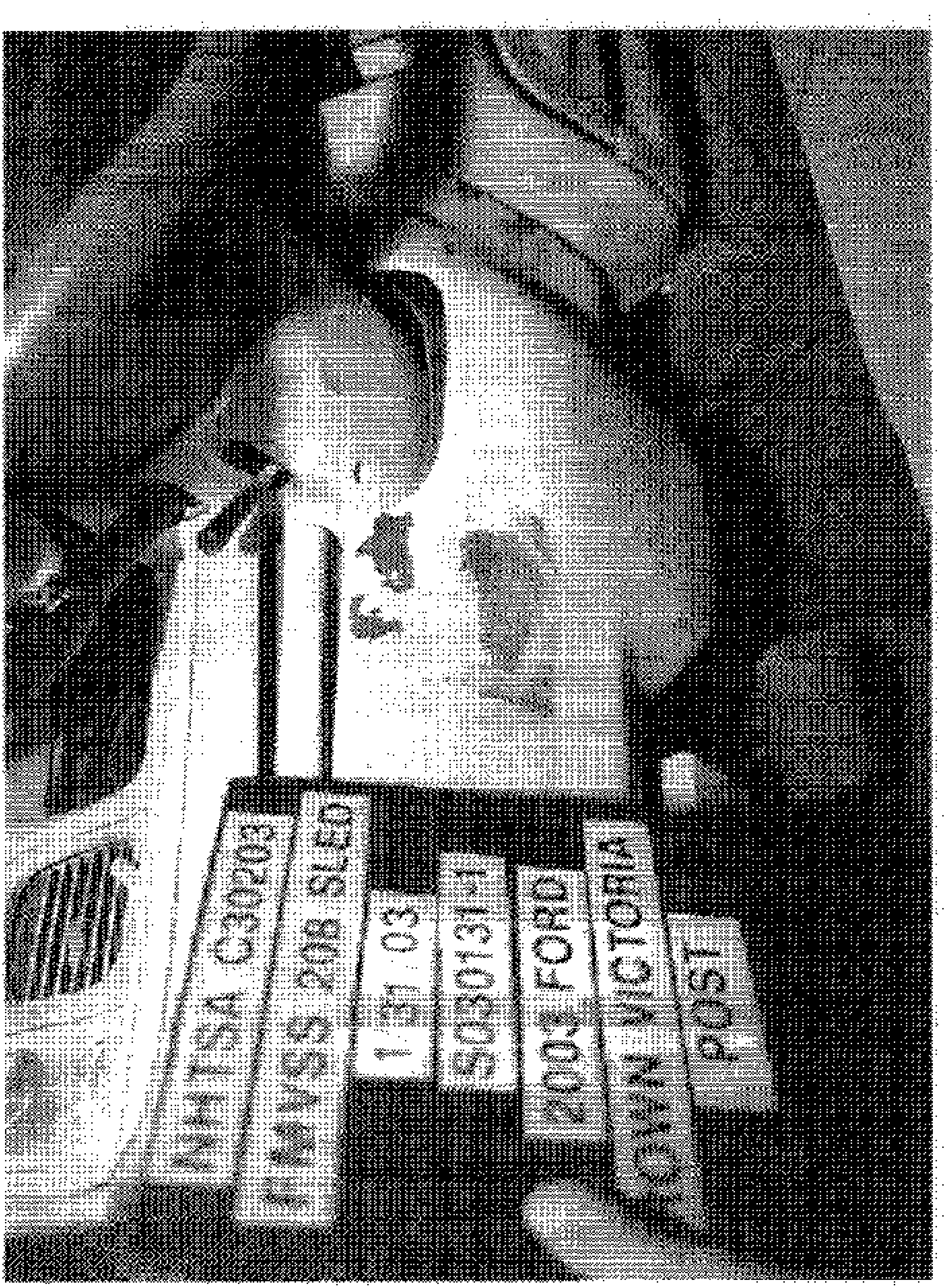


Figure A-34. Post-Test Driver Knee Bolster View

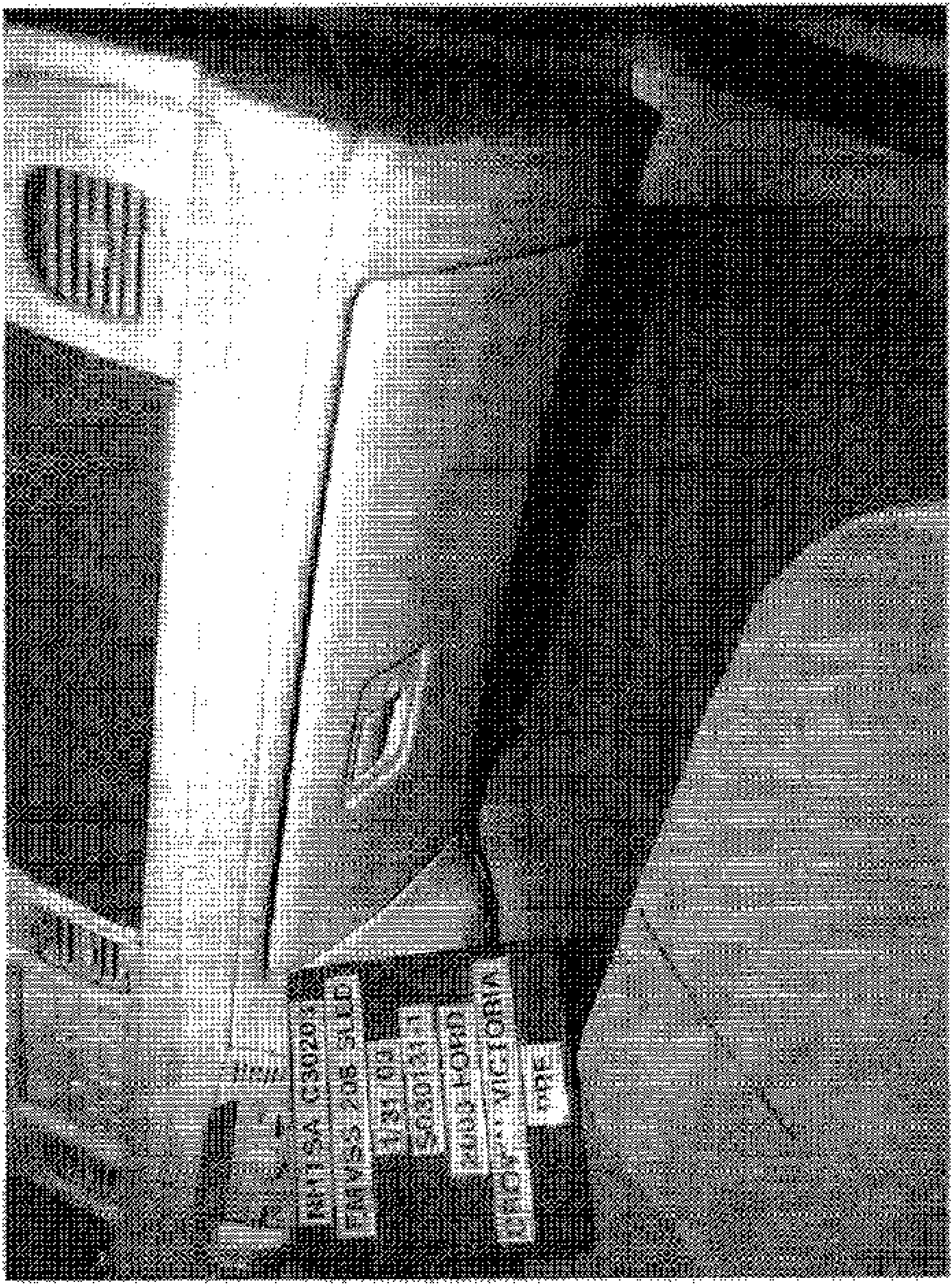


Figure A-35. Pre-Test Passenger Glove Box View

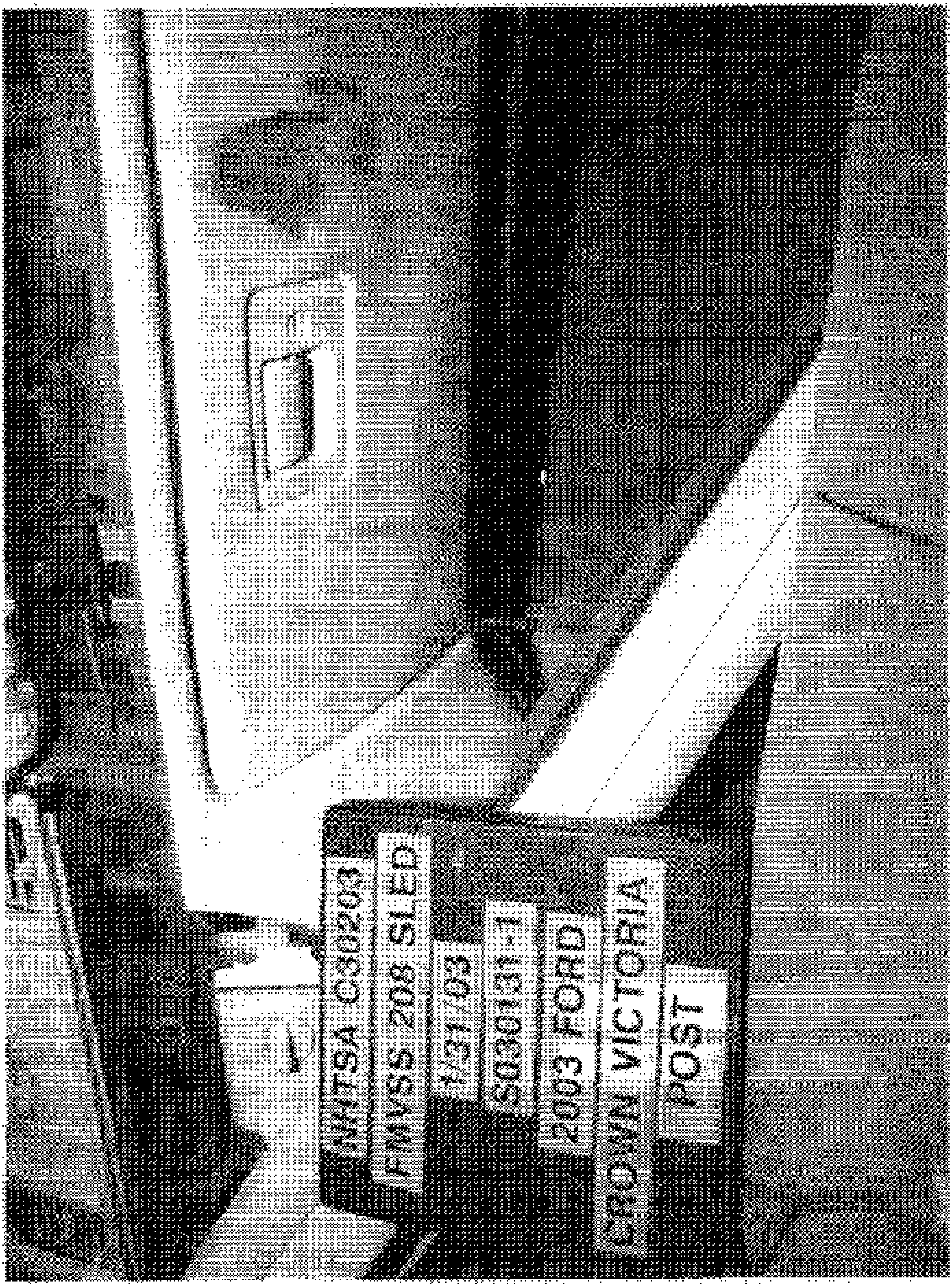


Figure A-36. Post-Test Passenger Glove Box View

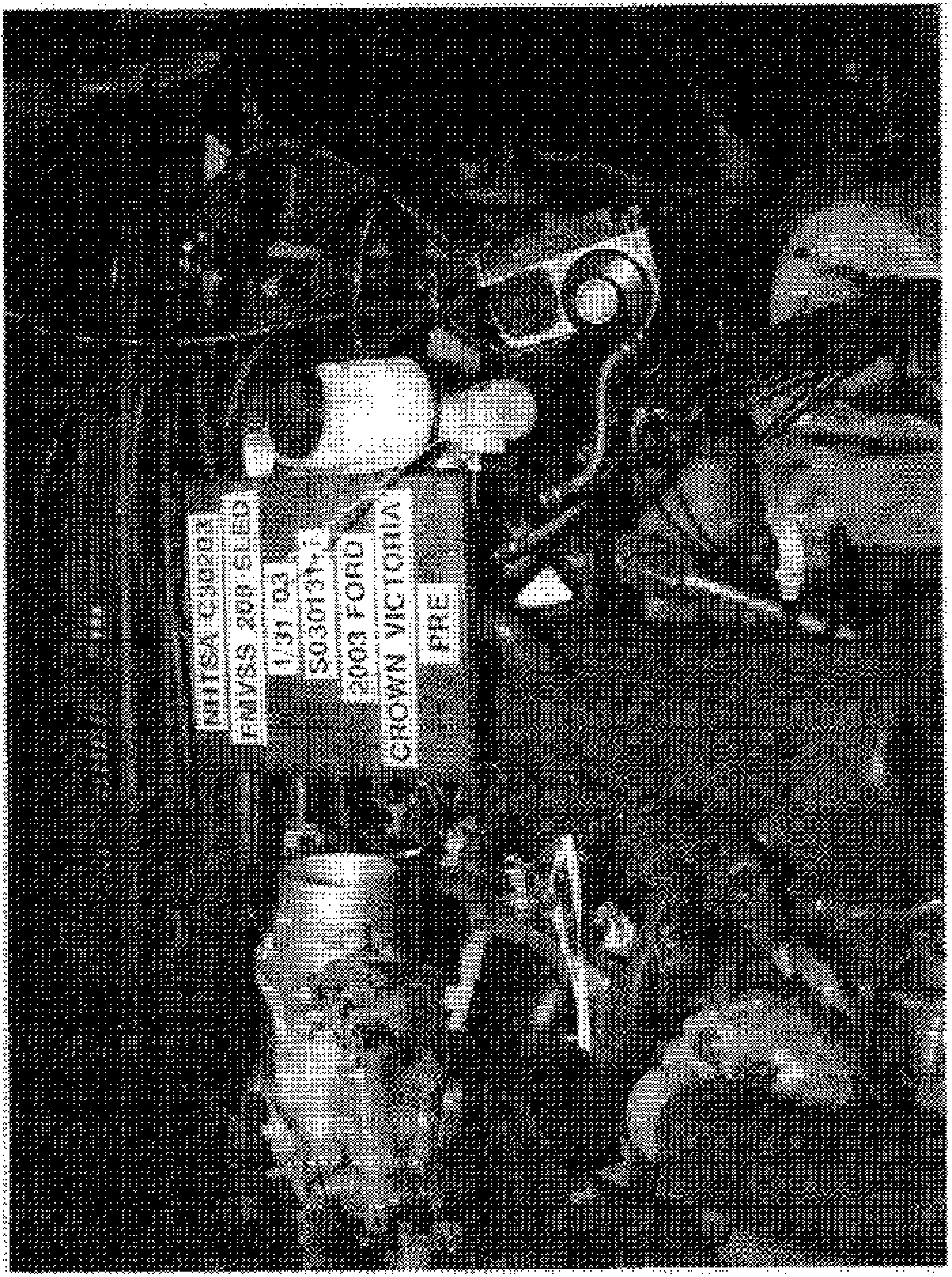


Figure A-37. Pre-Test Steering Column Linkage in Engine Compartment View

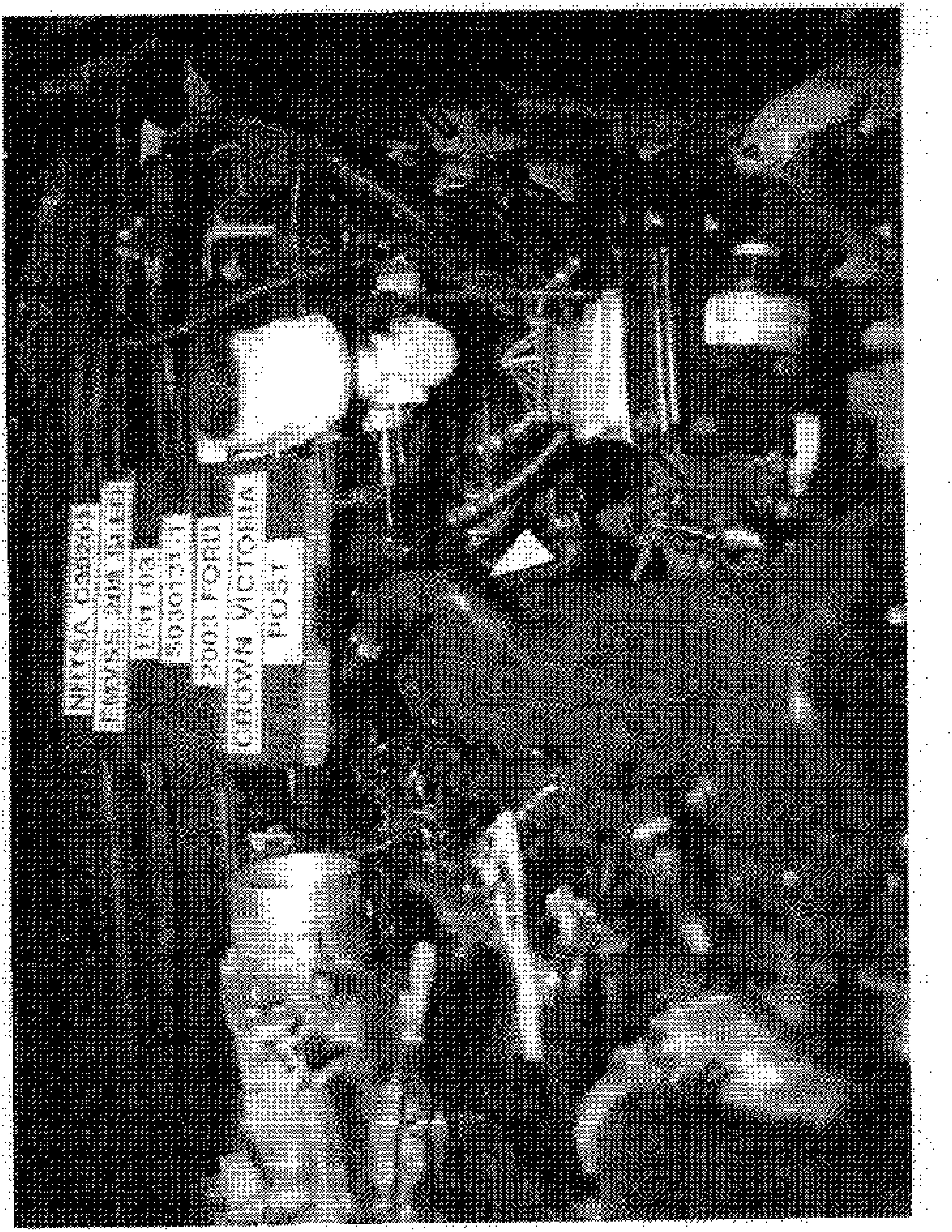


Figure A-38. Post-Test Steering Column Linkage in Engine Compartment View

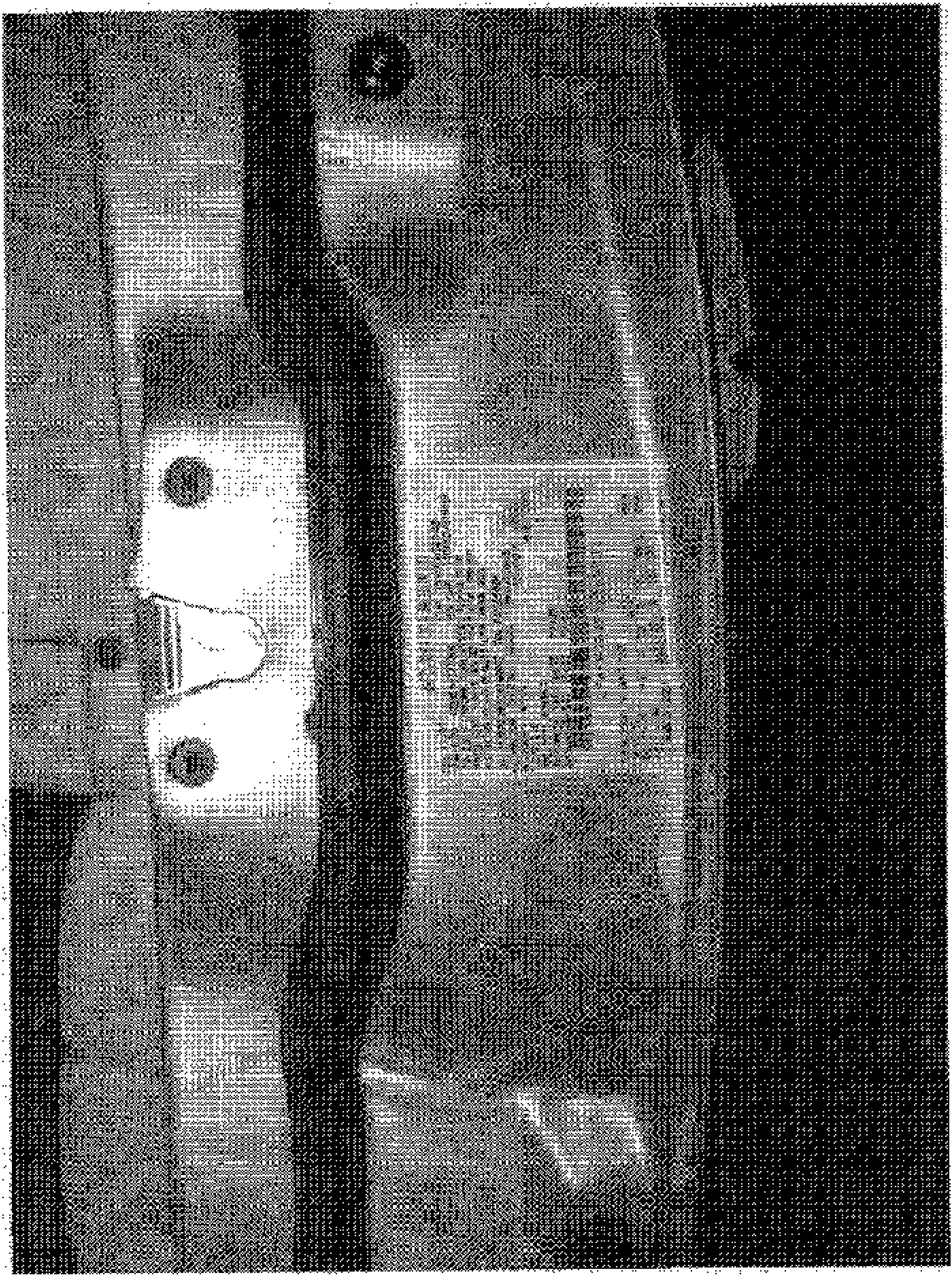
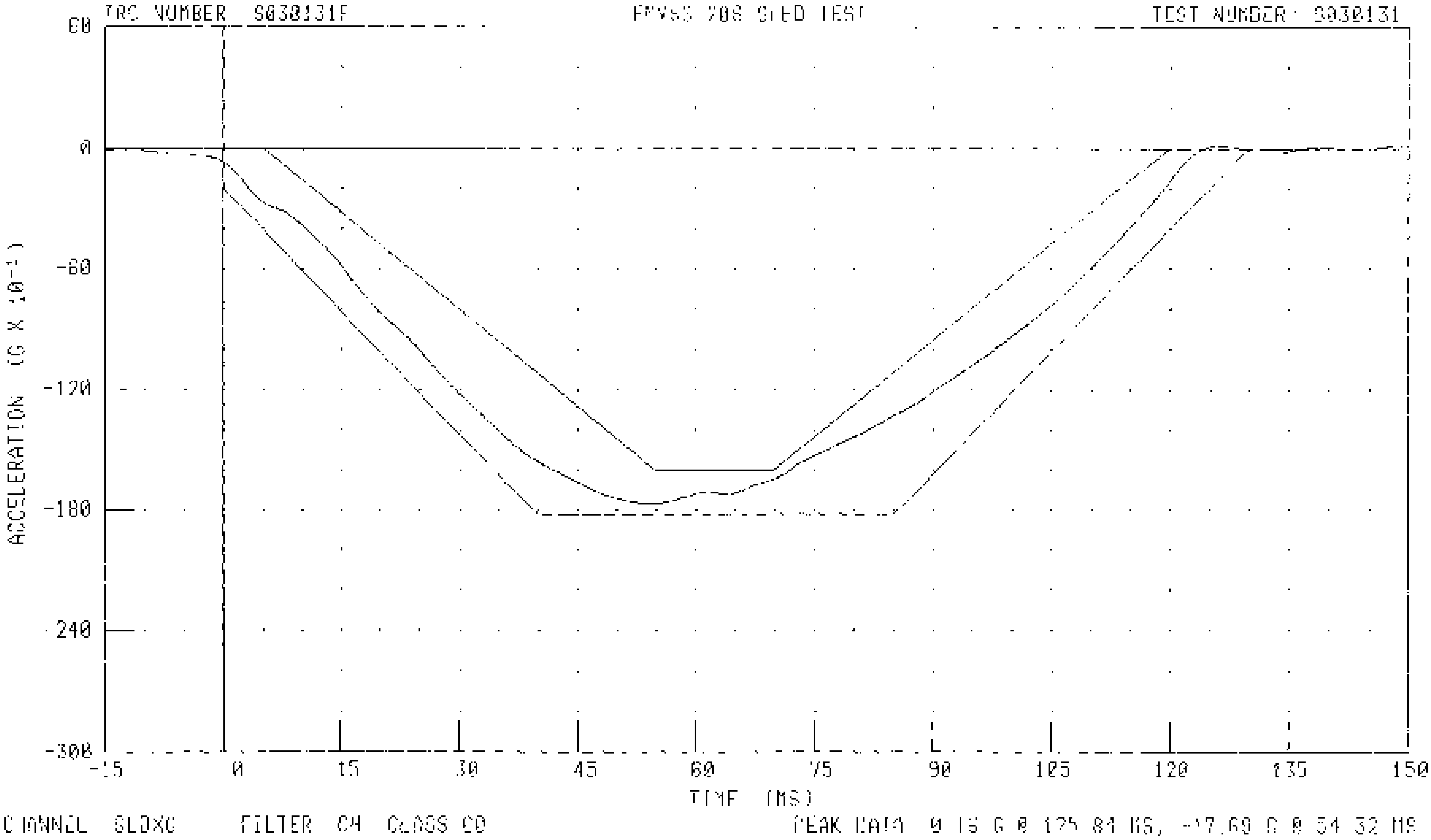


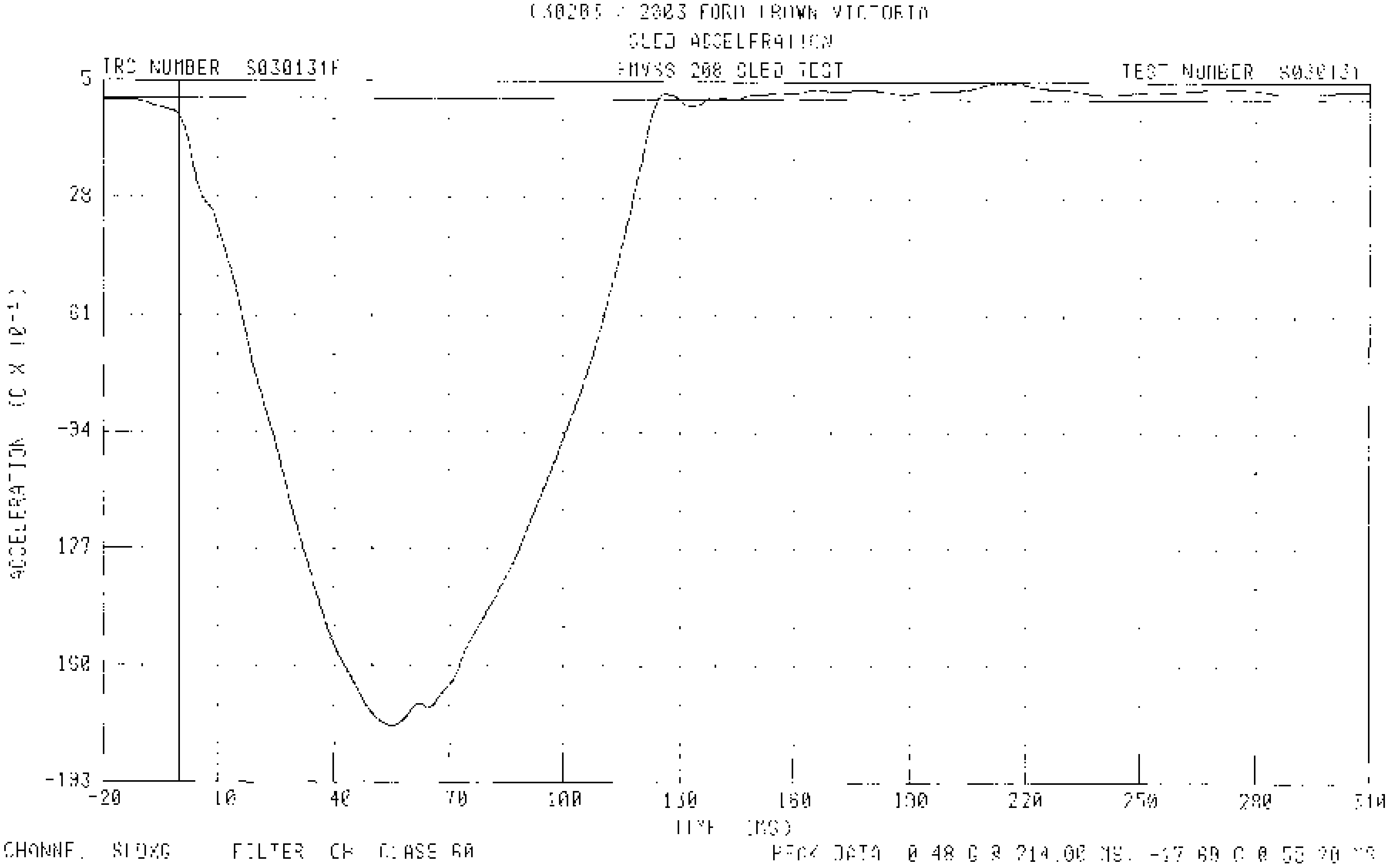
Figure A-39. Pre-Test Vehicle Certification Label View

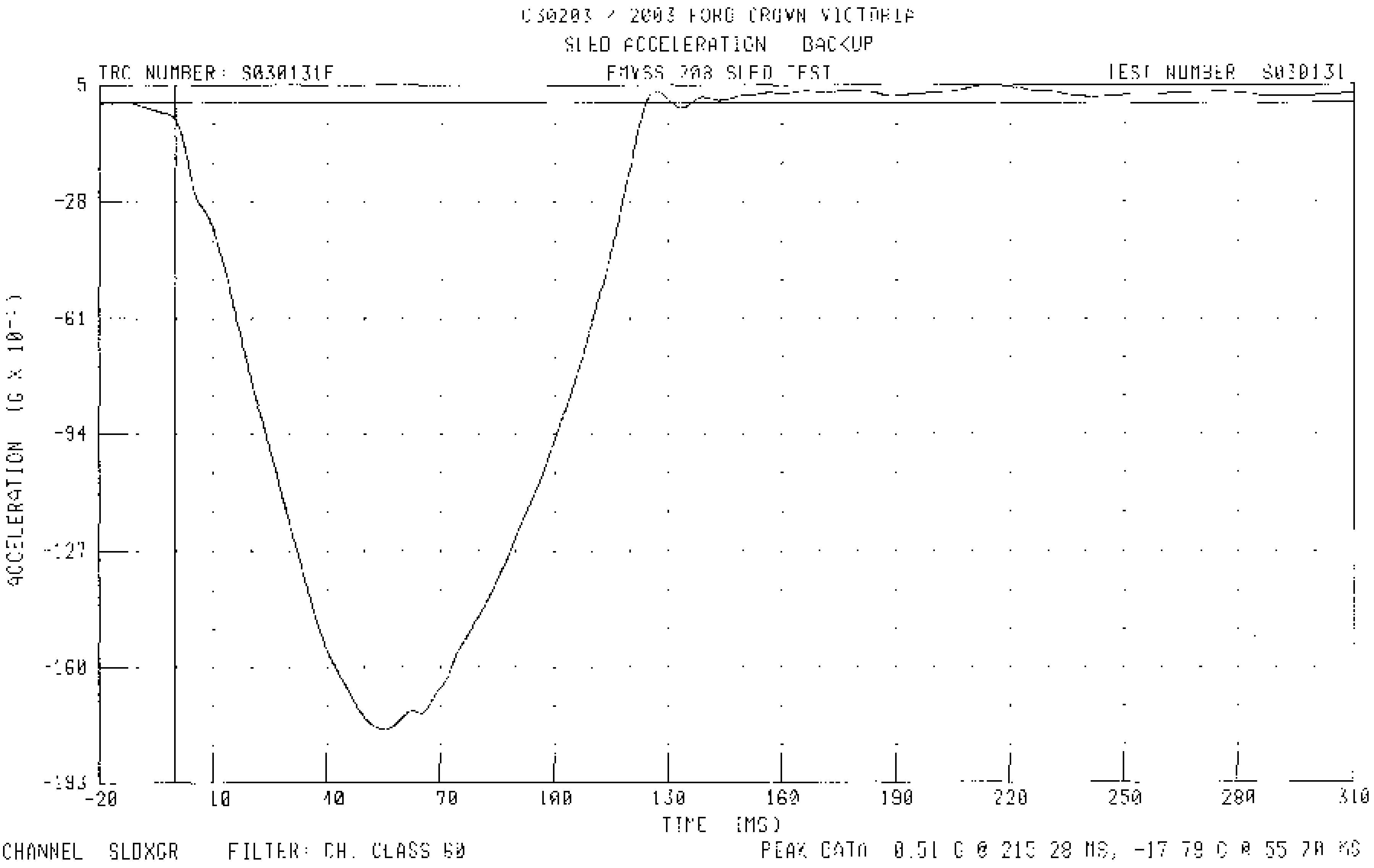
Appendix B

Data Plots

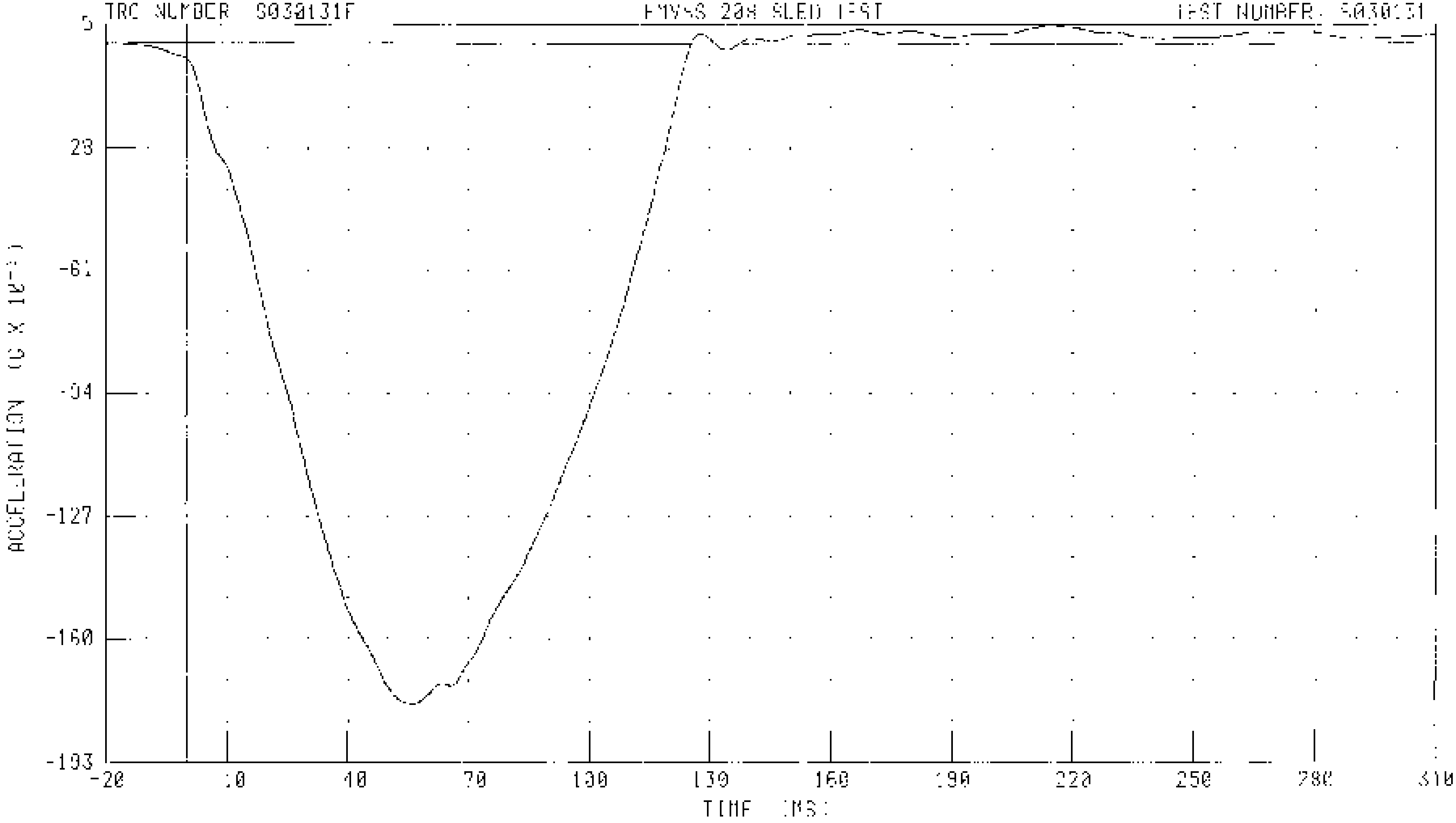
C30203 / 2003 FORD CROWN VICTORIA
SLED ACCELERATION
FMVSS 208 SLED TEST



C30285 - 2003 FORD CROWN VICTORIA
SLED ACCELERATION
FMVSS 208 SLED TEST
TRC NUMBER S030131F
TEST NUMBER S030131
ACCELERATION (G X 10-1)
5
28
61
-94
127
160
-193
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL SLDXG
FILTER CH CLASS 60
PEAK DATA 0.48 G @ 214.00 MS, -17.69 G @ 53.20 MS

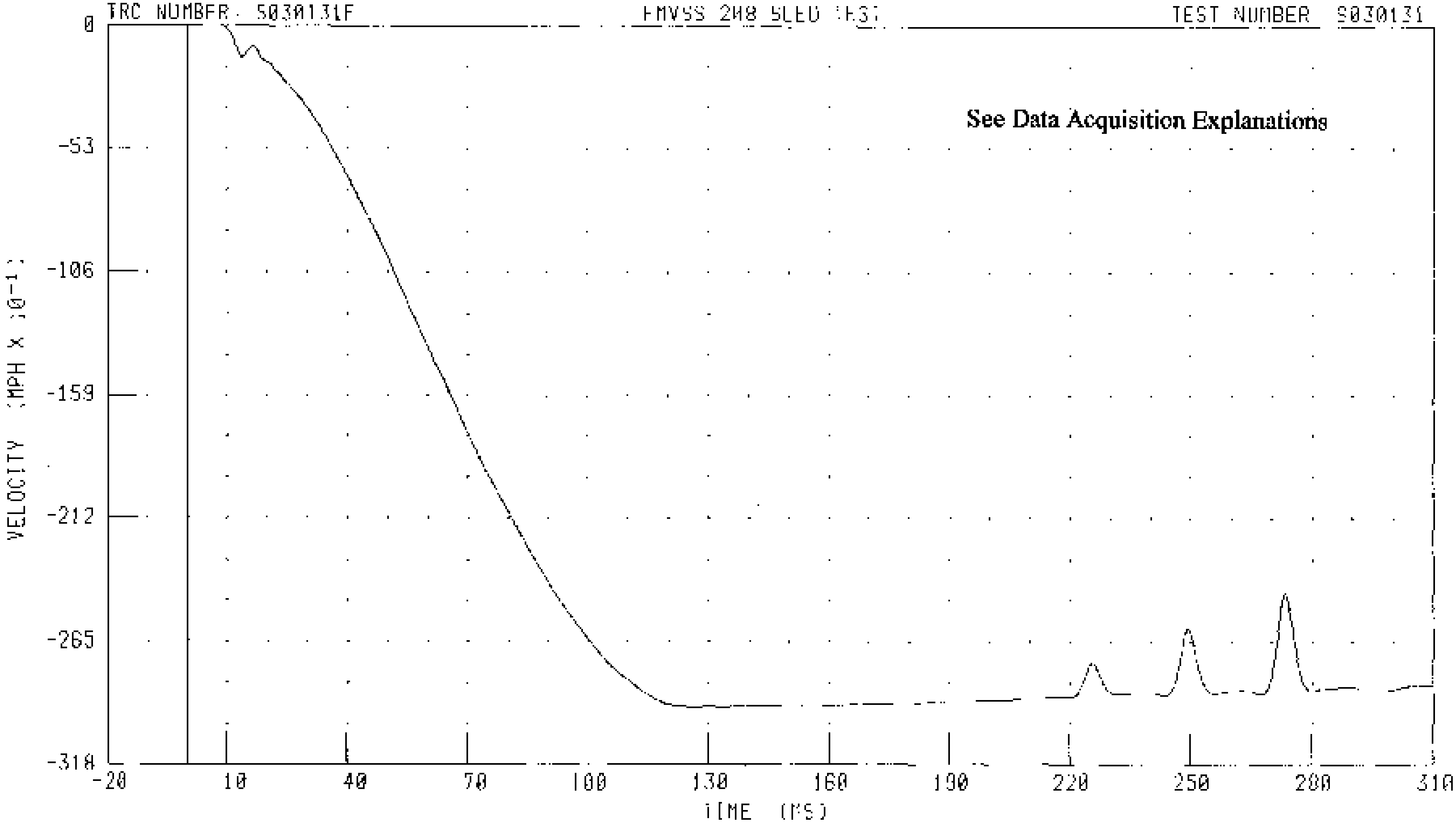

C30203 / 2003 FORD CROWN VICTORIA
SLED ACCELERATION BACKUP
TRC NUMBER: S030131F
FMVSS 208 SLED TEST
TEST NUMBER S030131
ACCELERATION (G X 10⁻¹)
5
-28
-61
-94
-127
-160
-193
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL SLDXGR
FILTER: CH. CLASS 60
PEAK DATA 0.51 G @ 215 28 MS, -17 79 G @ 55 70 MS

C30203 / 2003 FORD CROWN VICTORIA
SLED ACCELERATION FOR TIMING CIRCUIT
FMVSS 208 SLED TEST

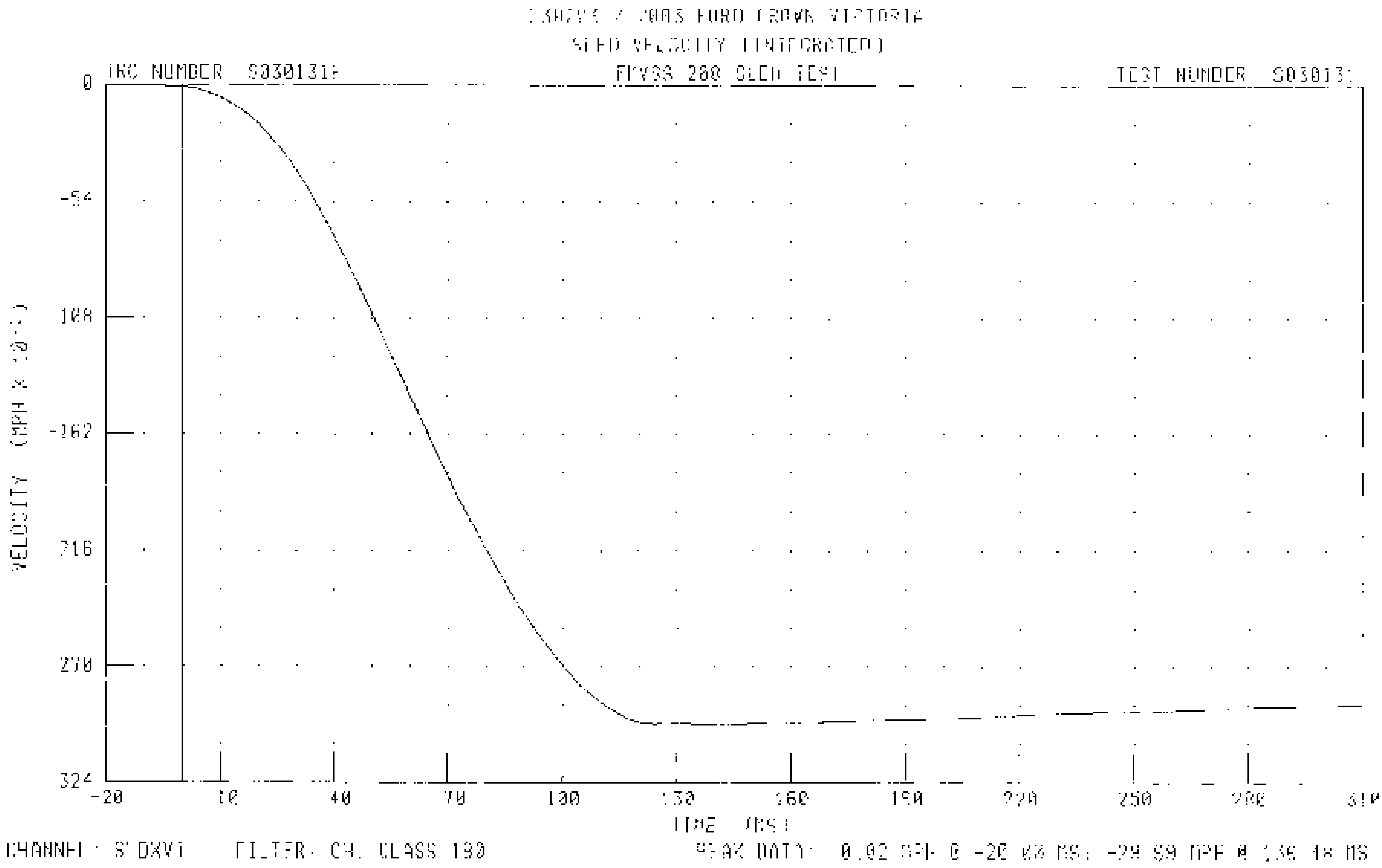


CHANNEL: SLDXG1 FILTER CH CLASS 60 PEAK DATA: 0.48 G @ 215.76 MS; -17.73 G @ 56.00 MS

C3A203 / 2003 FORD CROWN VICTORIA
MEASURED VELOCITY TRAP
FMVSS 208 SLED TEST



CHANNEL SLDXV FILTER CH CLASS 60 PEAK DATA: 0.85 MPH @ 0.00 MS, -29.33 MPH @ 133.76 MS


CSH2YS / 2003 FORD CROWN VICTORIA
SLED VELOCITY (INTEGRATED)
FMVSS 208 SLED TEST
TRC NUMBER S030131F
TEST NUMBER S030131
VELOCITY (MPH X 10-1)
0
-54
-108
-162
-216
-270
-324
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL : S1DXV1
FILTER: CH. CLASS 180
PEAK DATA: 0.02 MPH @ -20.00 MS; -29.99 MPH @ 136.48 MS

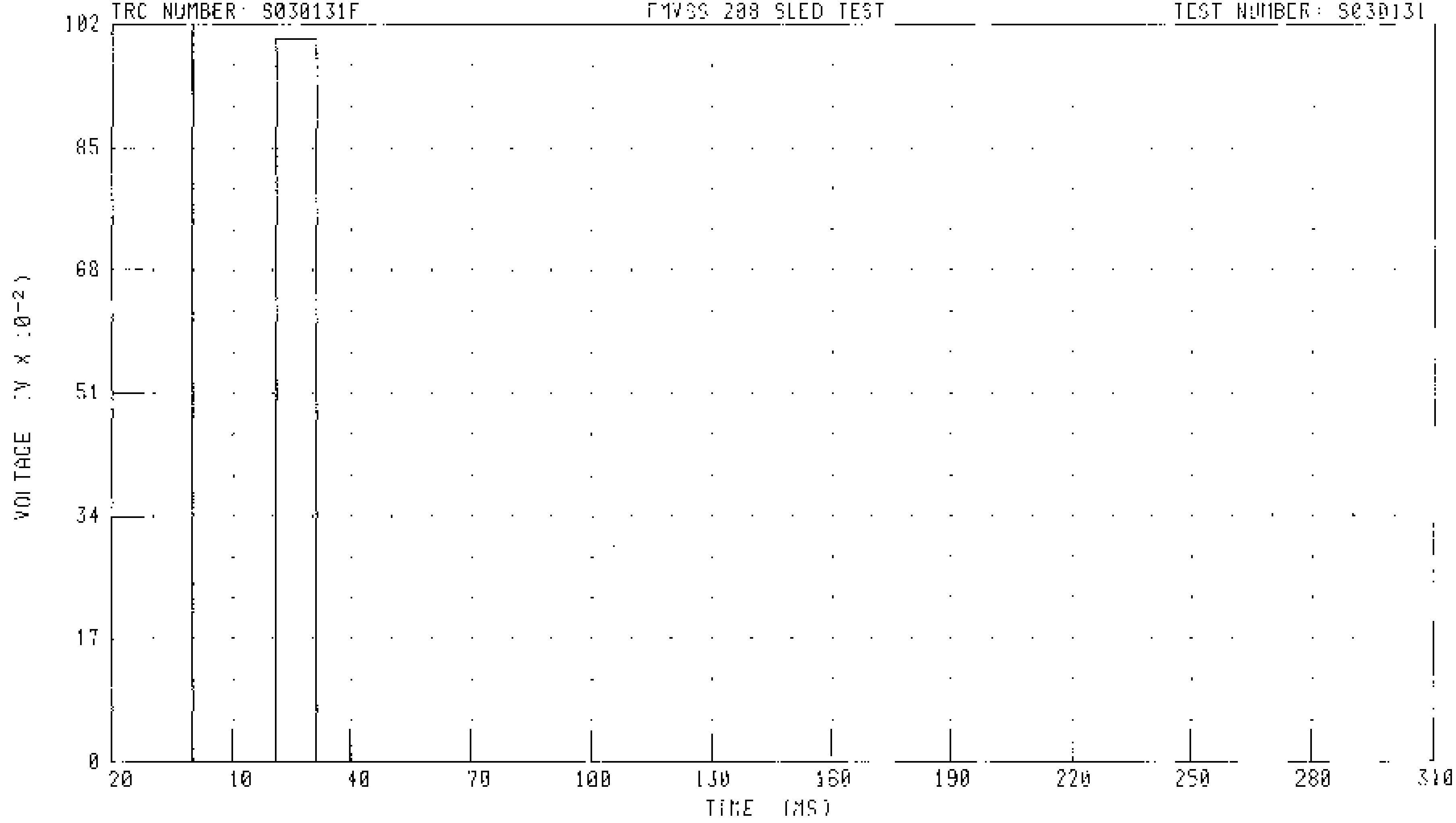
130203 / 2003 FORD CROWN VICTORIA

DRIVER PRIMARY AIRBAG EVENT

FMVSS 208 SLED TEST

TRC NUMBER: S030131F

TEST NUMBER: S030131

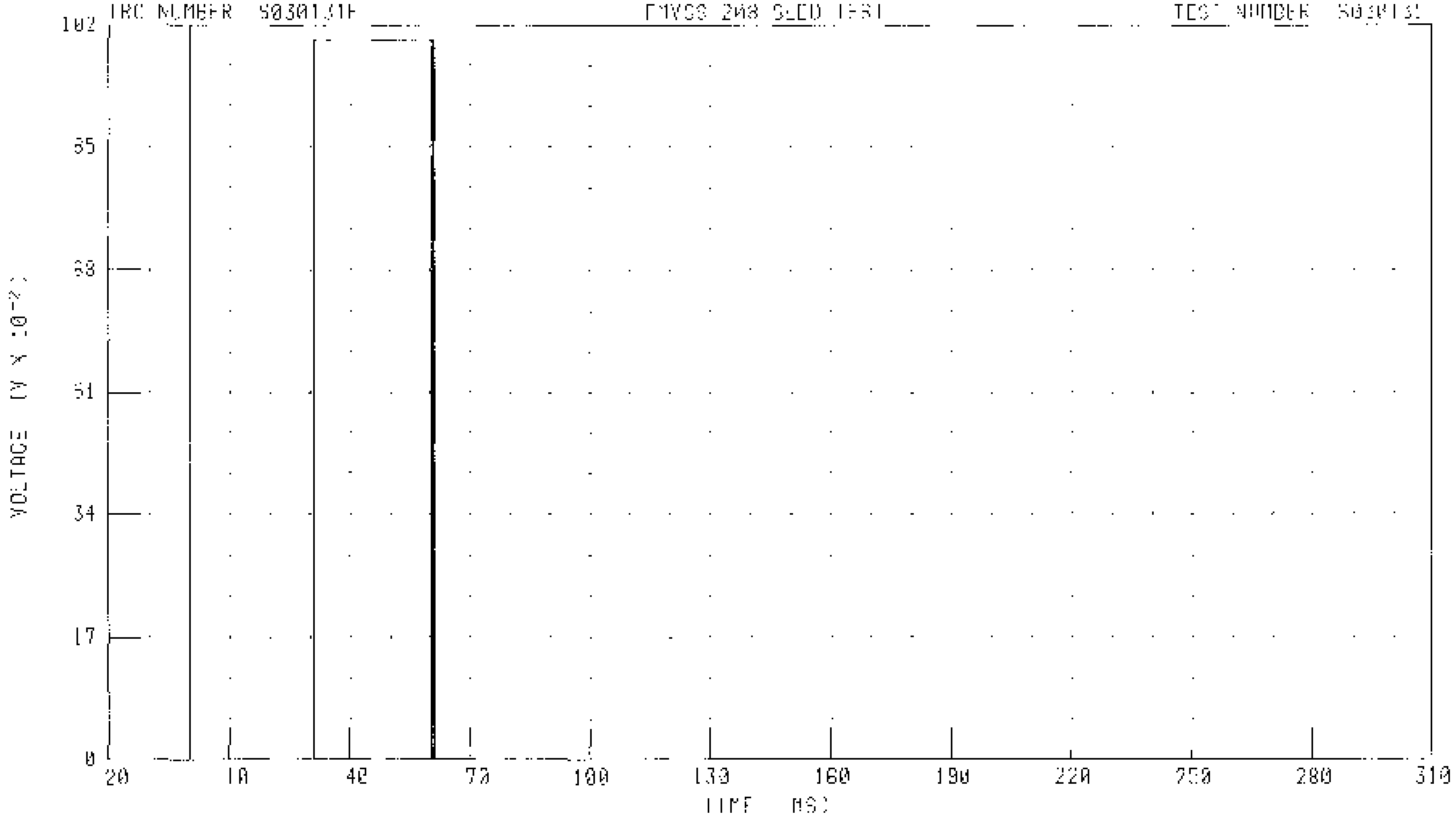


CHANNEL: 0ABET1 FILTER: CH CLASS 1000

PEAK DATA: 1.00 V @ 21.04 MS, 0.00 V @ -20.00 MS

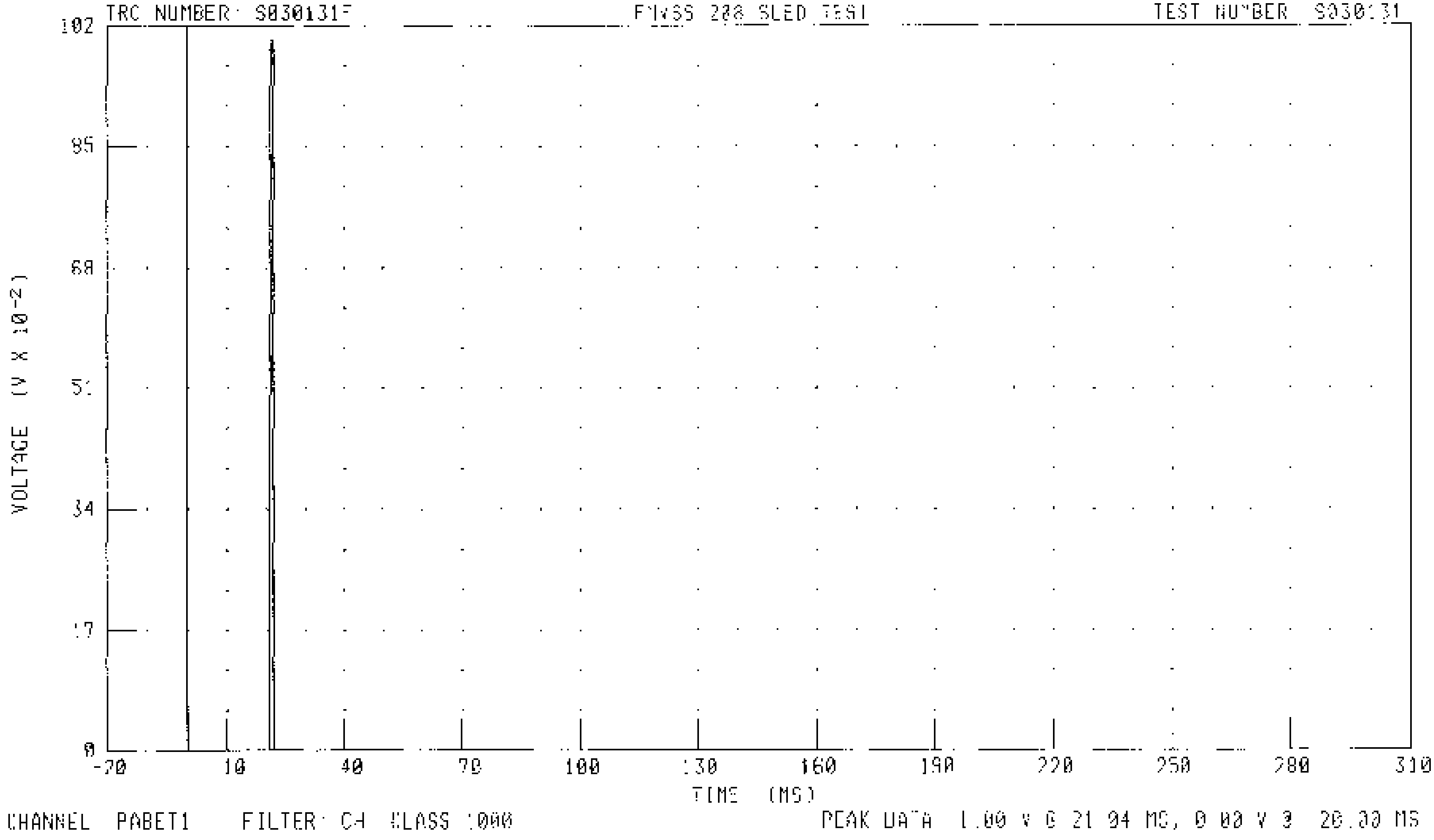
C30203 - 2003 FORD CROWN VICTORIA

DRIVER SECONDARY AIRBAG EVENT



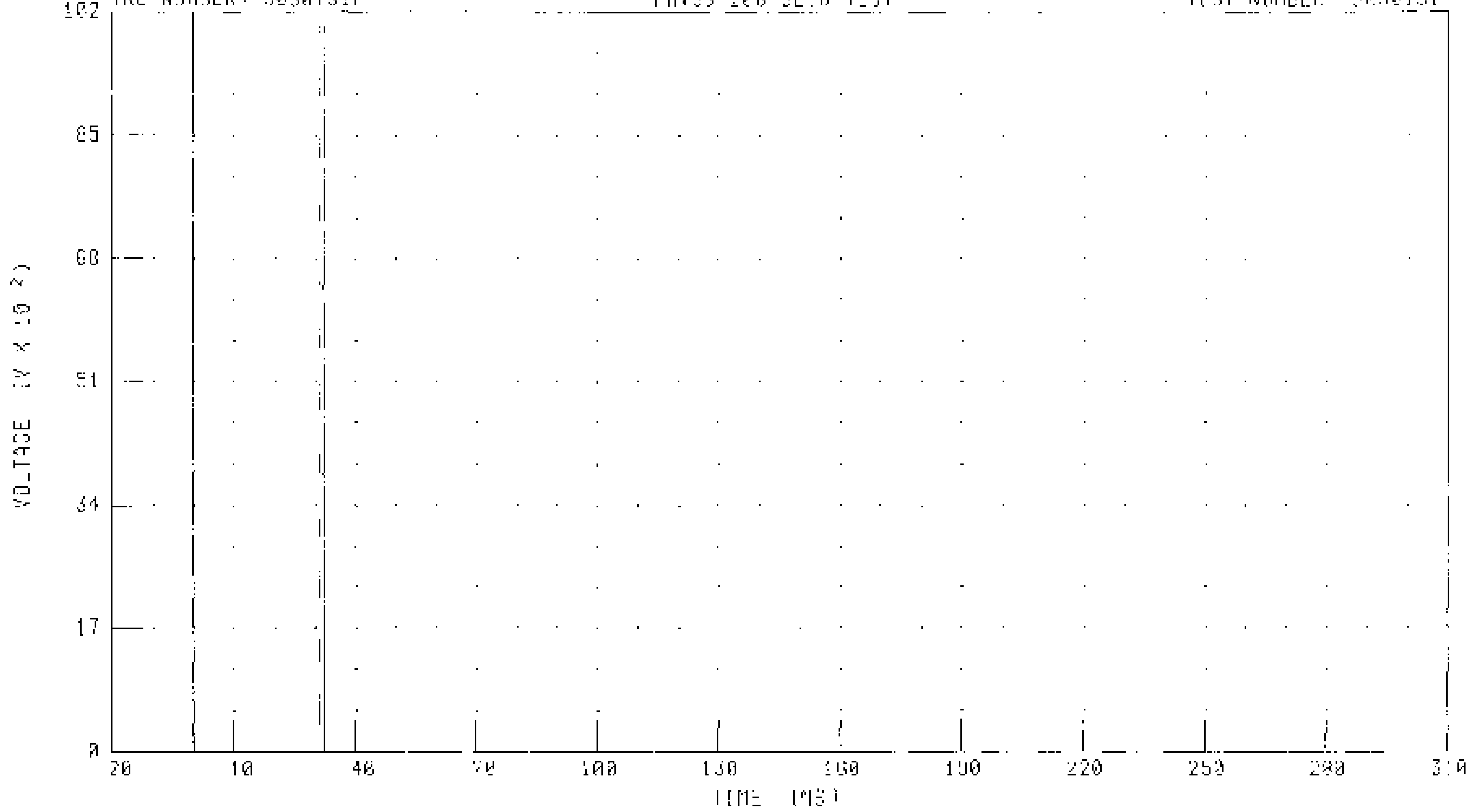
CHANNEL : CABLT2   FILTER: CH CLASS 1000   PEAK DATA : 1.00 V @ 51.04 MS, 0.02 V @ -20.00 MS

C302W3 - 2003 FORD CROWN VICTORIA
PASSENGER PRIMARY AIRBAG EVENT



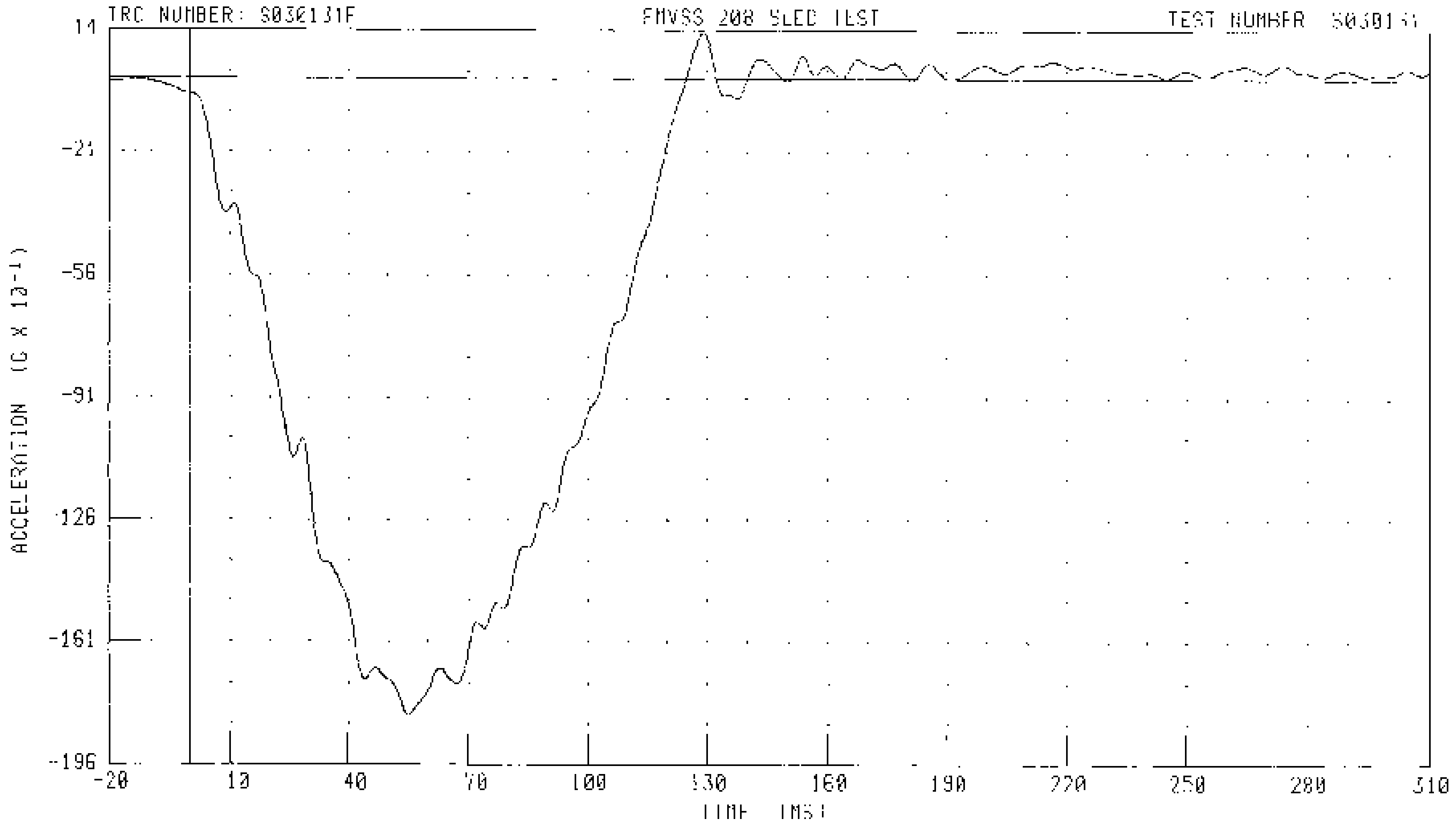
C30283 / 2003 FORD CROWN VICTORIA
PASSENGER SECONDARY AIRBAG EVENT

TRC NUMBER: S030131E FMVSS 208 SLED TEST TEST NUMBER: S030131



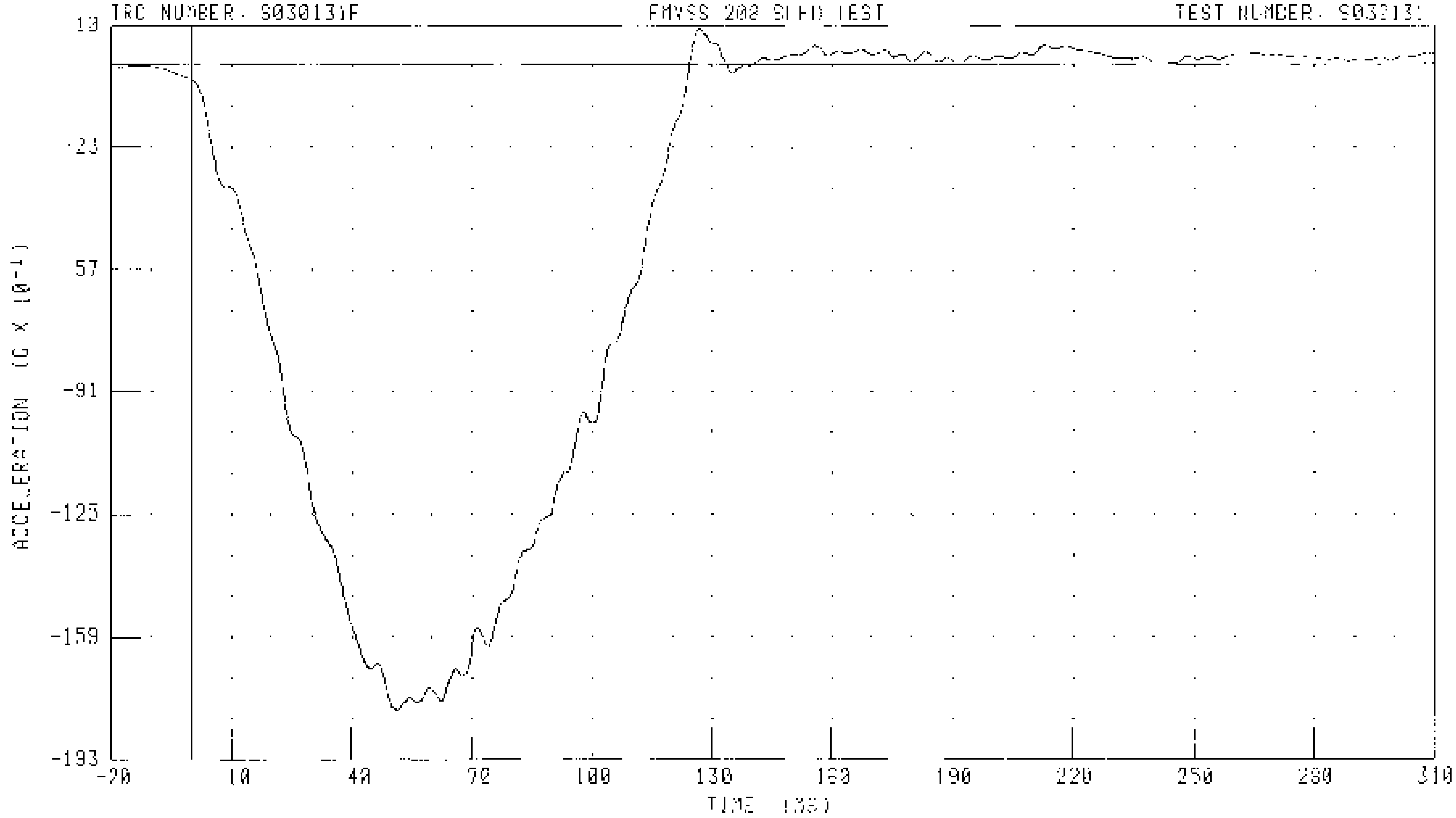
CHANNEL: P93E12 FILTER: CH CLASS 1000 PEAK DATA: 1.00 V @ 31.04 MS; 0.00 V @ -20.00 MS

030/03 / 2003 FORD CROWN VICTORIA
REAR AXLE X-AXIS ACCELERATION
FMVSS 208 SLED TEST



CHANNEL: RAXG FILTER CH. CLASS 60 PEAK DATA: 1.33 G @ 129.28 MS, -18.10 G @ 55.35 MS

C30203 / 2003 FORD CROWN VICTORIA
LEFT BODY AT REAR SEAT X AXIS ACCELERATION

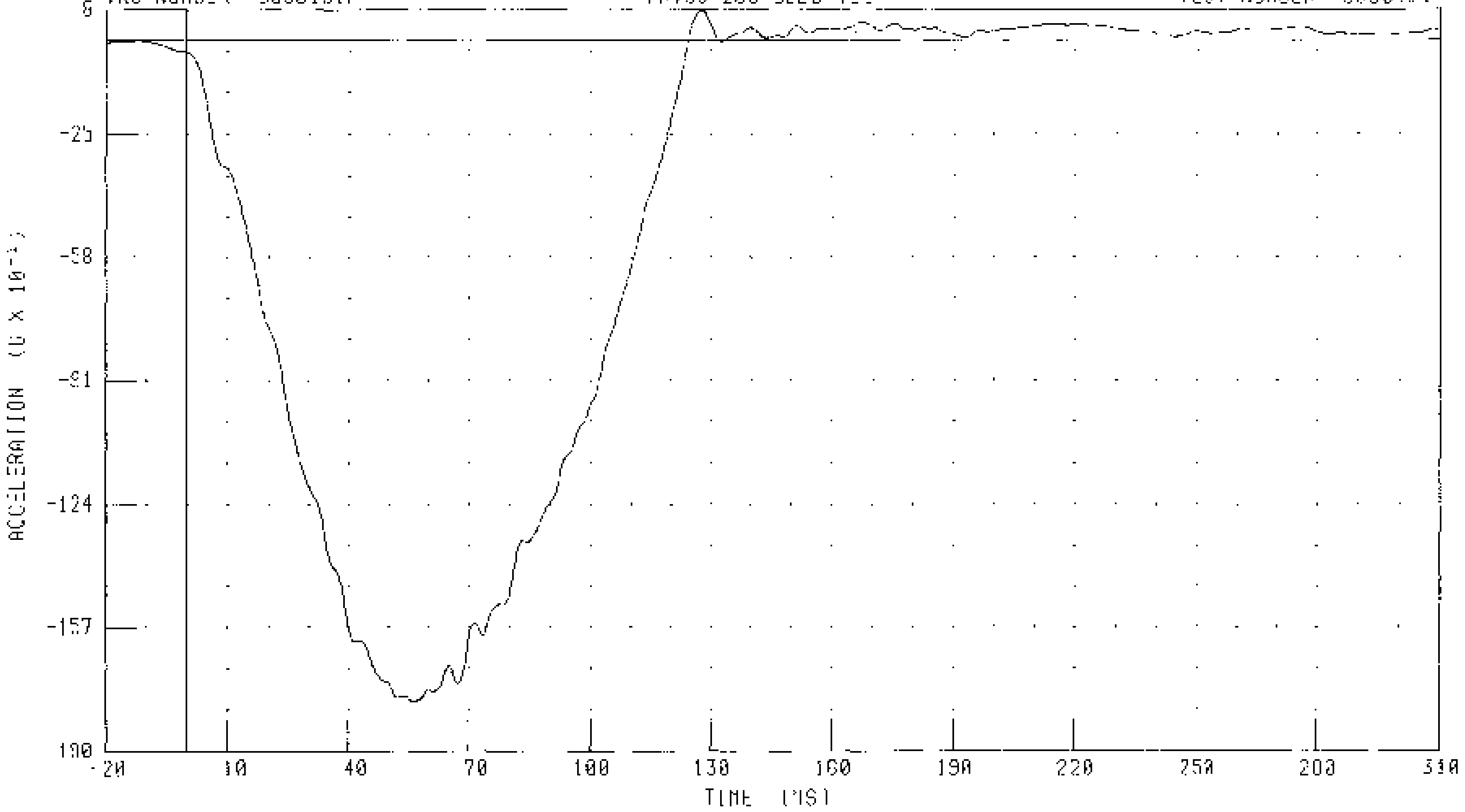


CHANNEL LBXG   FILTER: CFC CLASS 60   PEAK DATA 1.02 G @ 127.04 MS, -17.92 G @ 51.28 MS

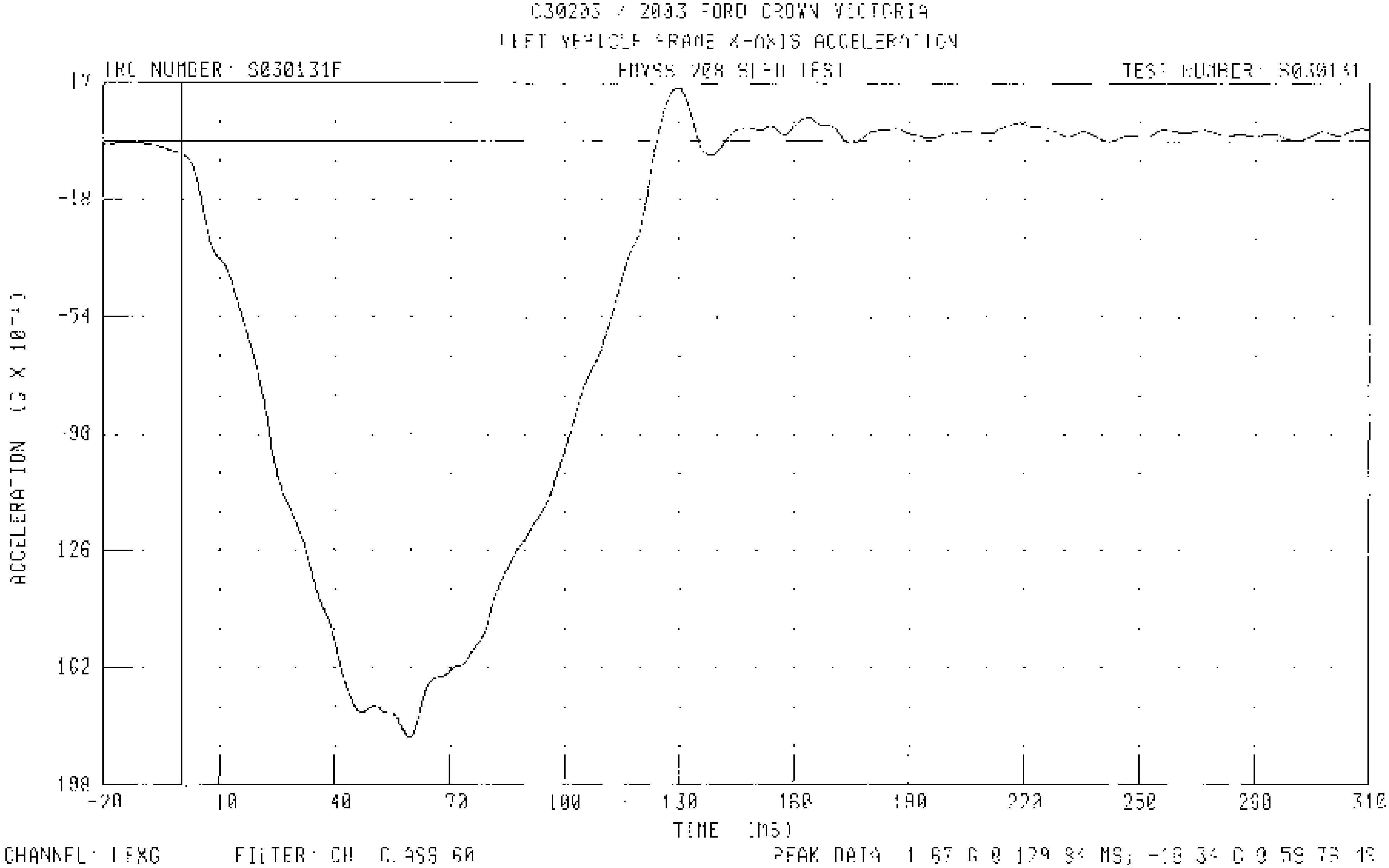
S30203 / 2003 FORD CROWN VICTORIA

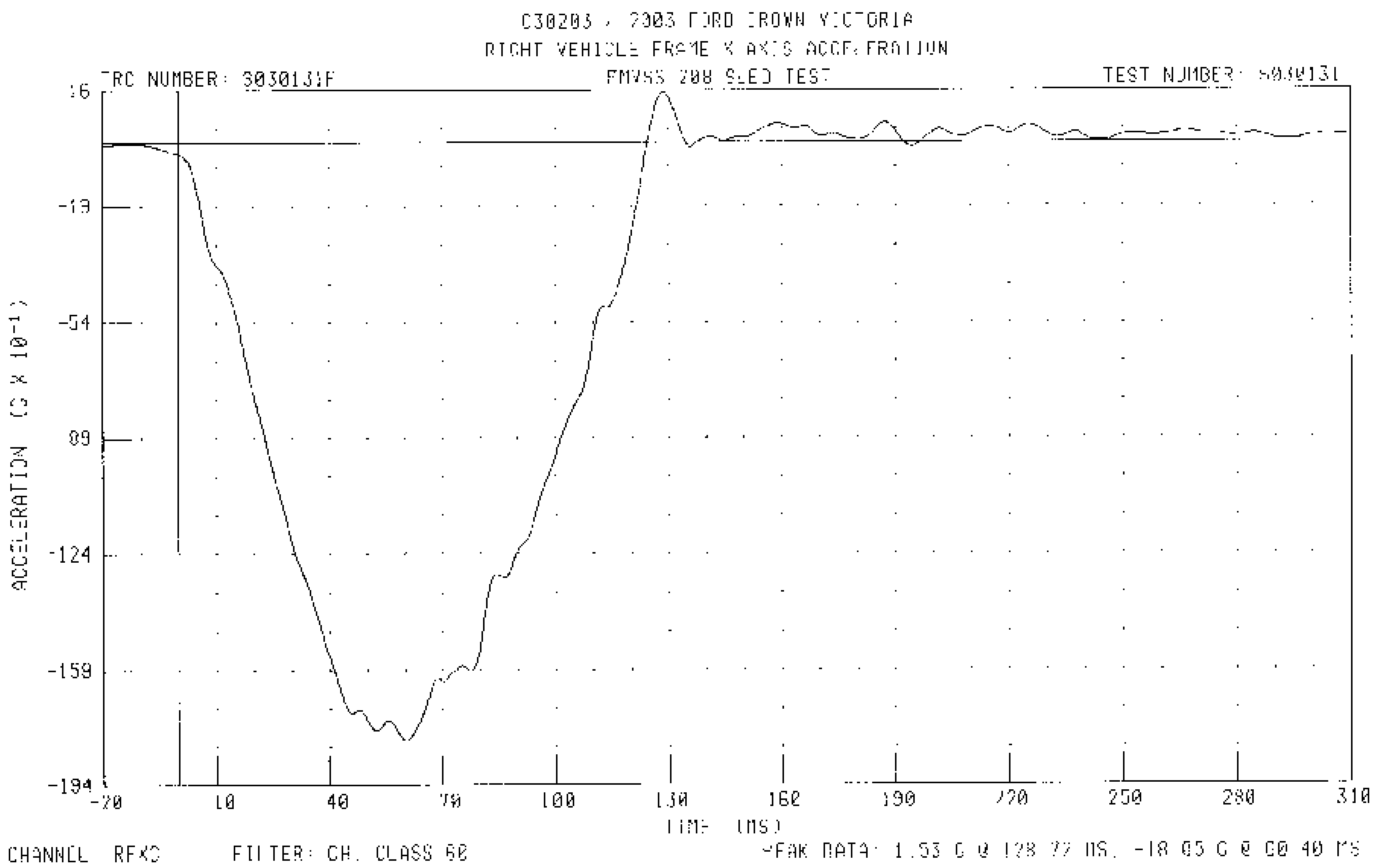
RIGHT BODY AT REAR SEAT X-AXIS ACCELERATION

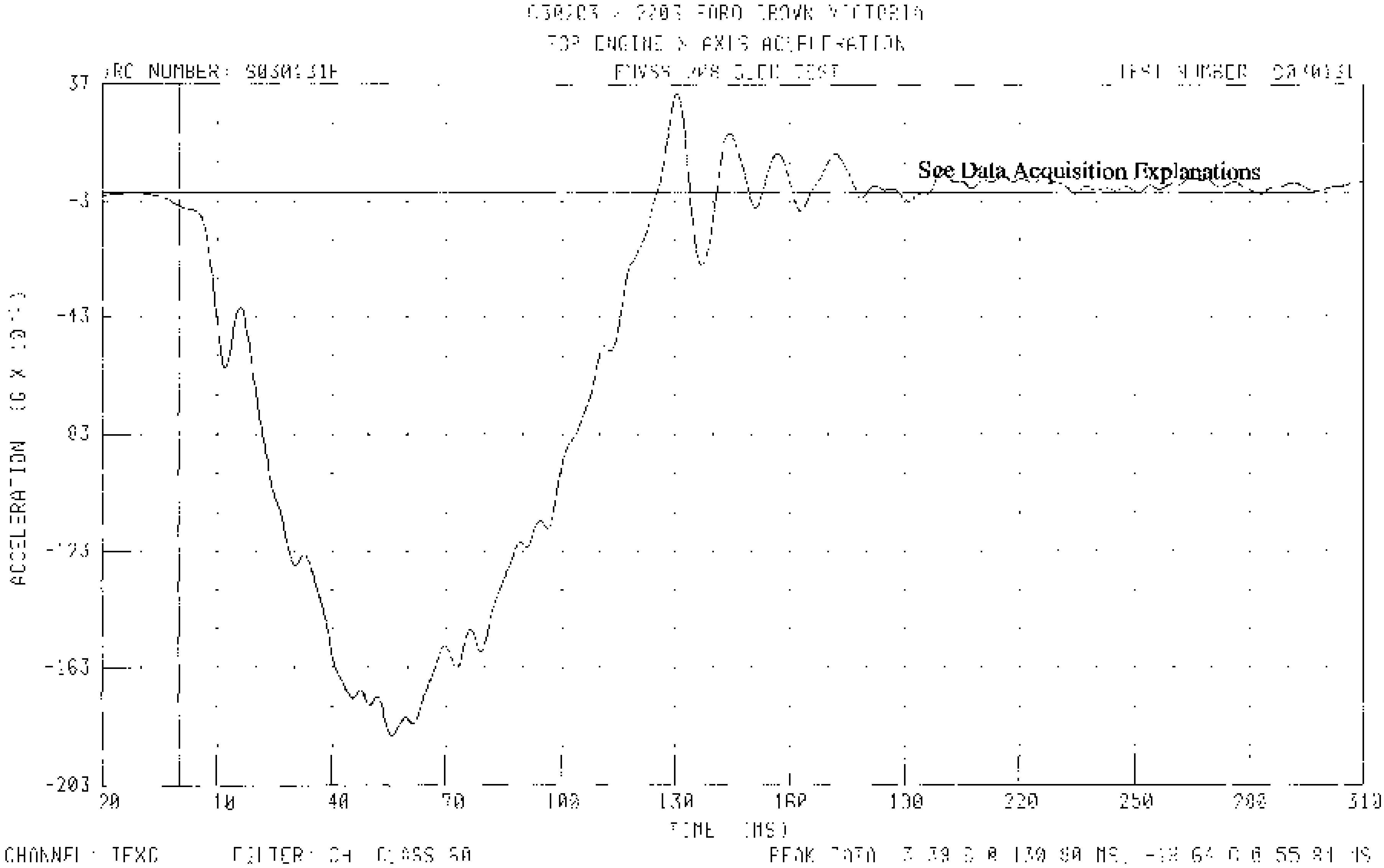
TRC NUMBER S030131F FMVSS 208 SLED TEST TEST NUMBER: S030131



CHANNEL: RBXG FILTER CH CLASS 60 PEAK DATA 0.80 G @ 127.70 MS, 17.67 G @ 56.40 MS


C30203 / 2003 FORD CROWN VICTORIA
LEFT VEHICLE FRAME X-AXIS ACCELERATION
TRC NUMBER: S030131F
FMVSS 208 SLED TEST
TEST NUMBER: S030131
17
-18
-54
-90
126
162
198
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
ACCELERATION (G X 10^-1)
CHANNEL: LFXG
FILTER: CH CLASS 60
PEAK DATA: 1.67 G @ 129.84 MS; -18.34 G @ 59.73 MS

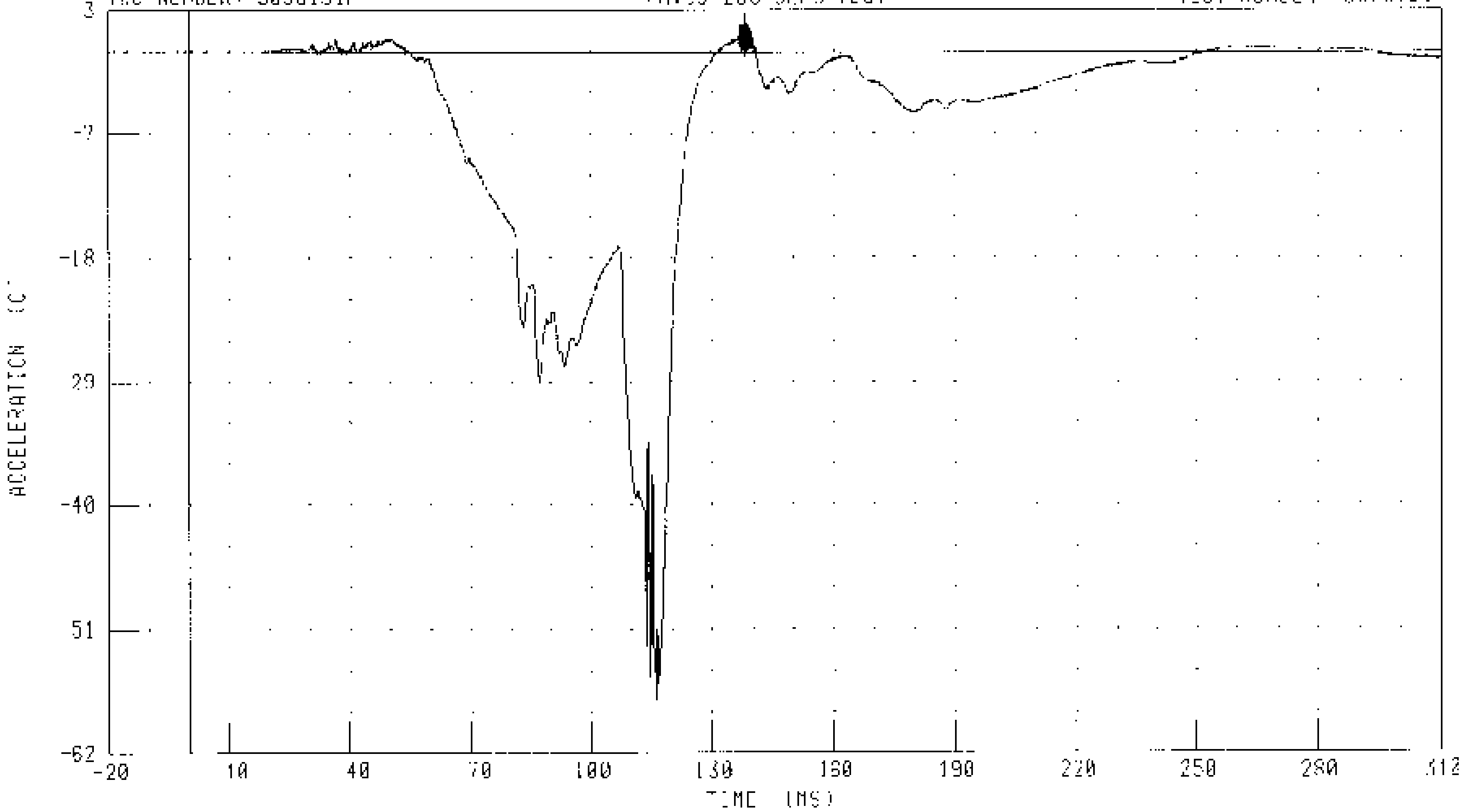

C30203 , 2003 FORD CROWN VICTORIA
RIGHT VEHICLE FRAME X AXIS ACCELERATION
FMVSS 208 SLED TEST
TRC NUMBER: 030131F
TEST NUMBER: 030131
ACCELERATION (G X 10⁻¹)
16
-19
-54
-89
-124
-159
-194
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL RFXC
FILTER: CH. CLASS 60
PEAK DATA: 1.53 G @ 128.77 MS, -18.05 G @ 60.40 MS


030203 - 2003 FORD CROWN VICTORIA
TOP ENGINE X AXIS ACCELERATION
TRC NUMBER: 030131F
FMVSS 208 OLEN TEST
TEST NUMBER 030131
See Data Acquisition Explanations
37
-3
-43
-83
-123
-163
-203
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
ACCELERATION (G X 10^-1)
CHANNEL: TEXC
FILTER: CH CLASS 60
PEAK DATA 3.39 G @ 130.80 MS, -18.64 G @ 55.81 MS

C30203 / 2003 FORD CROWN VICTORIA
DRIVER HEAD X-AXIS ACCELERATION
FMVSS 208 SLED TEST

TRC NUMBER: S030131F

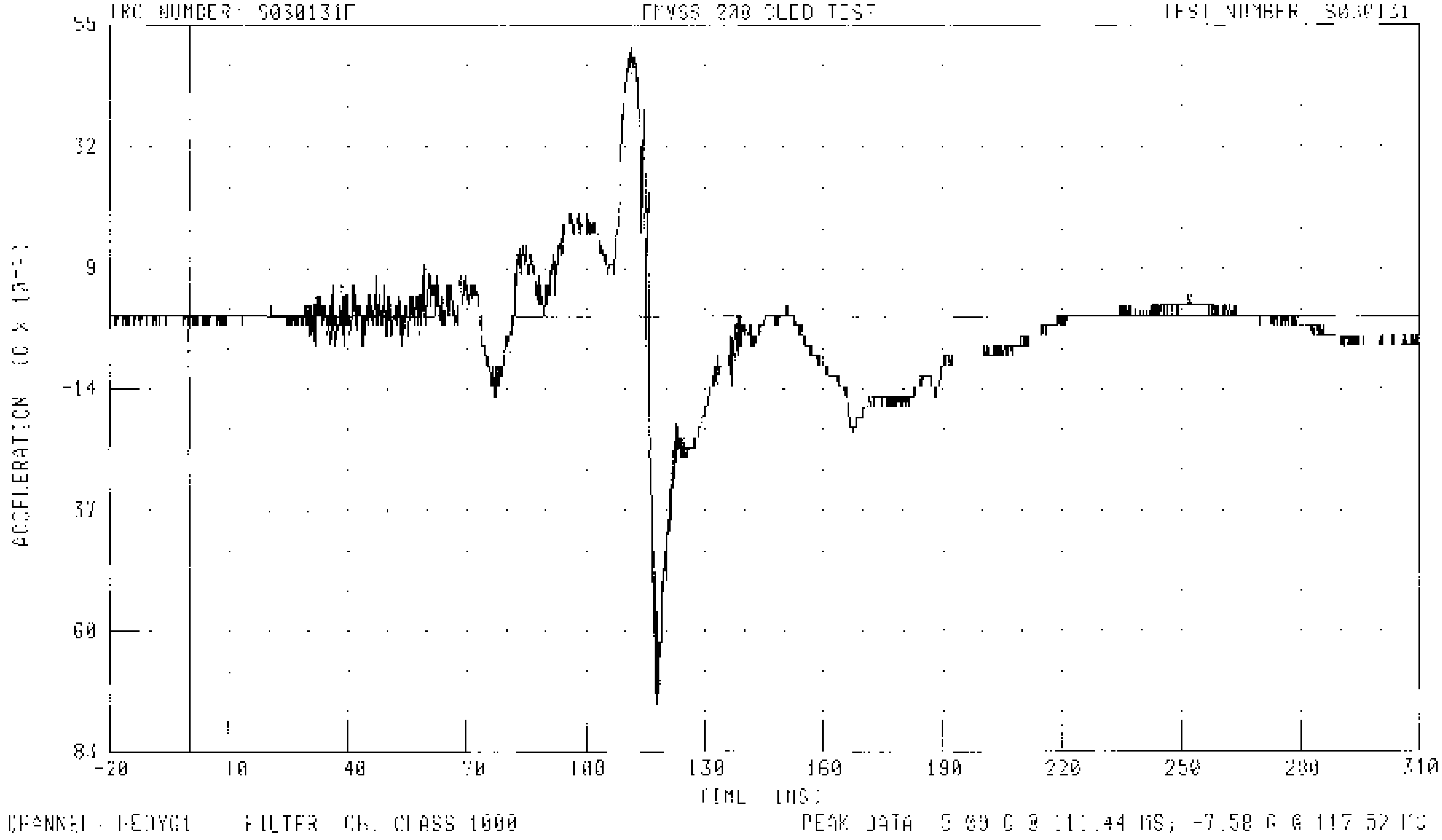
TEST NUMBER: S030131



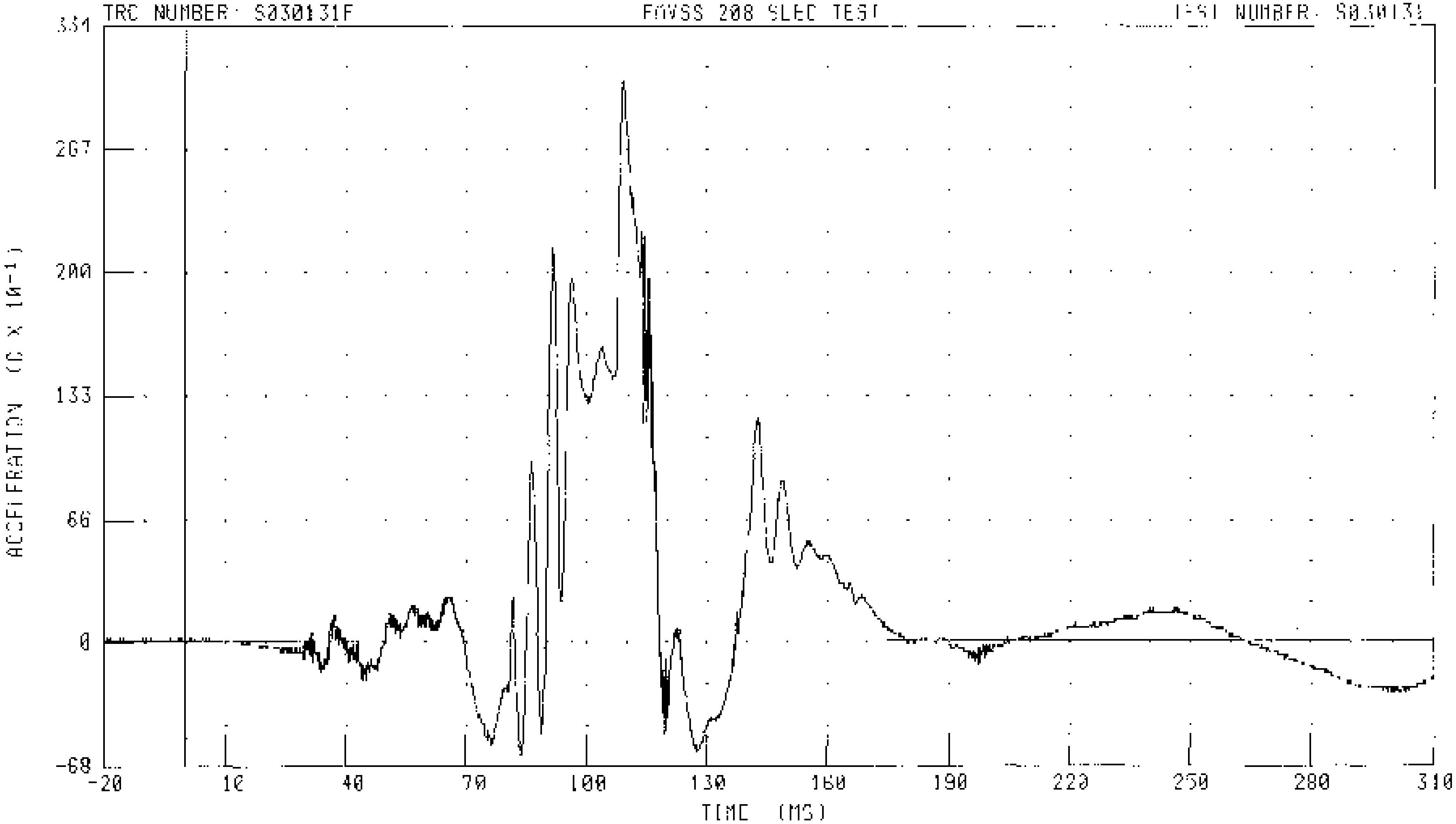
CHANNEL HEDXG1 FILTER: CH. CLASS 1000

PEAK DATA 3.49 G @ 130.08 MS, 57.41 G @ 116.24 MS

C30203 / 2003 FORD CROWN VICTORIA
DRIVER HEAD Y AXIS ACCELERATION

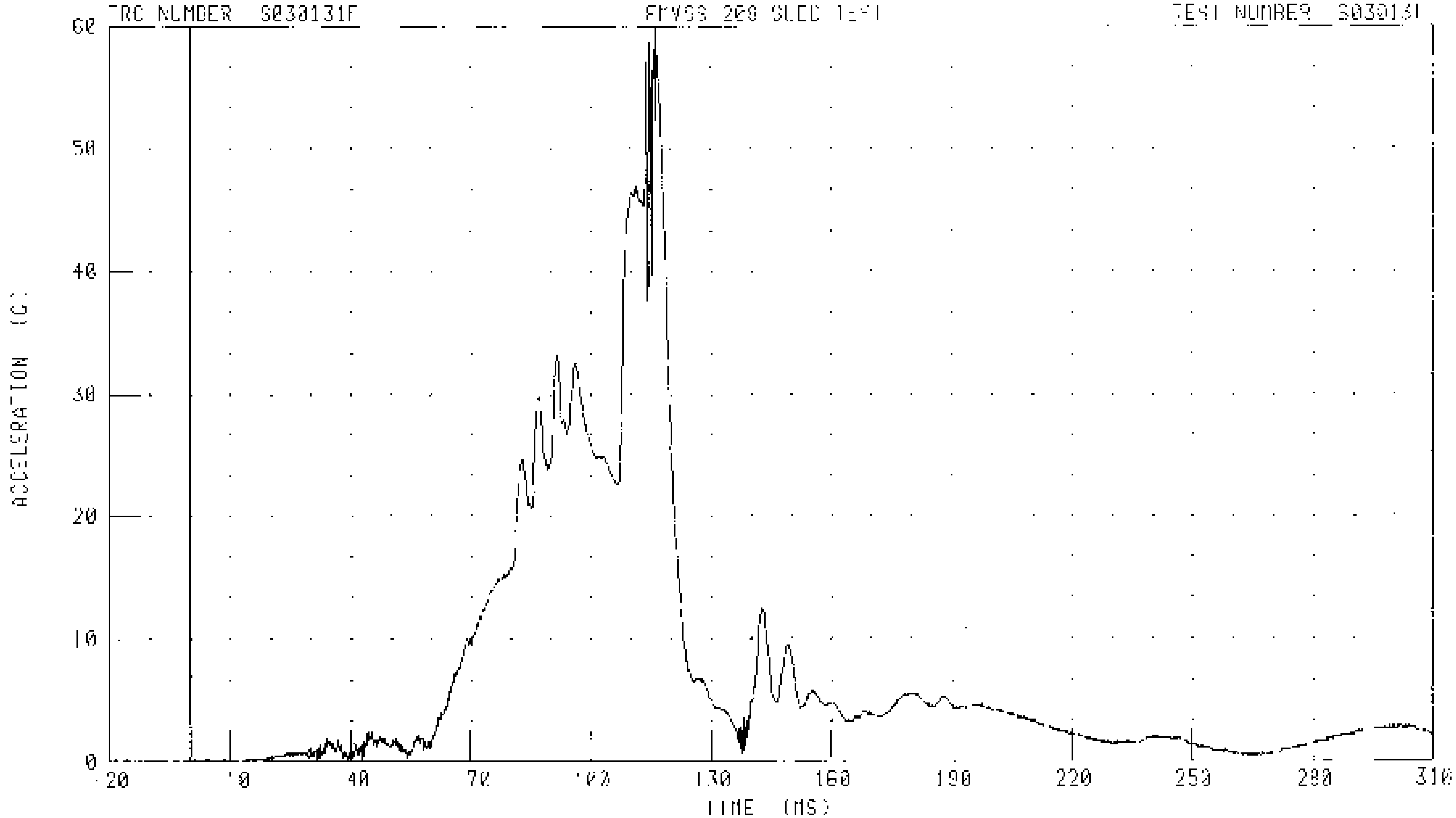


C30203 / 2003 FORD CROWN VICTORIA
DRIVER HEAD Z-AXIS ACCELERATION



CHANNEL HFD7G1   FILTER: CH CLASS 1000   PEAK DATA 30.41 G @ 108.96 MS; -6.26 G @ 83.52 MS

C30203 / 2003 FORD CROWN VICTORIA
DRIVER HEAD RESULTANT ACCELERATION

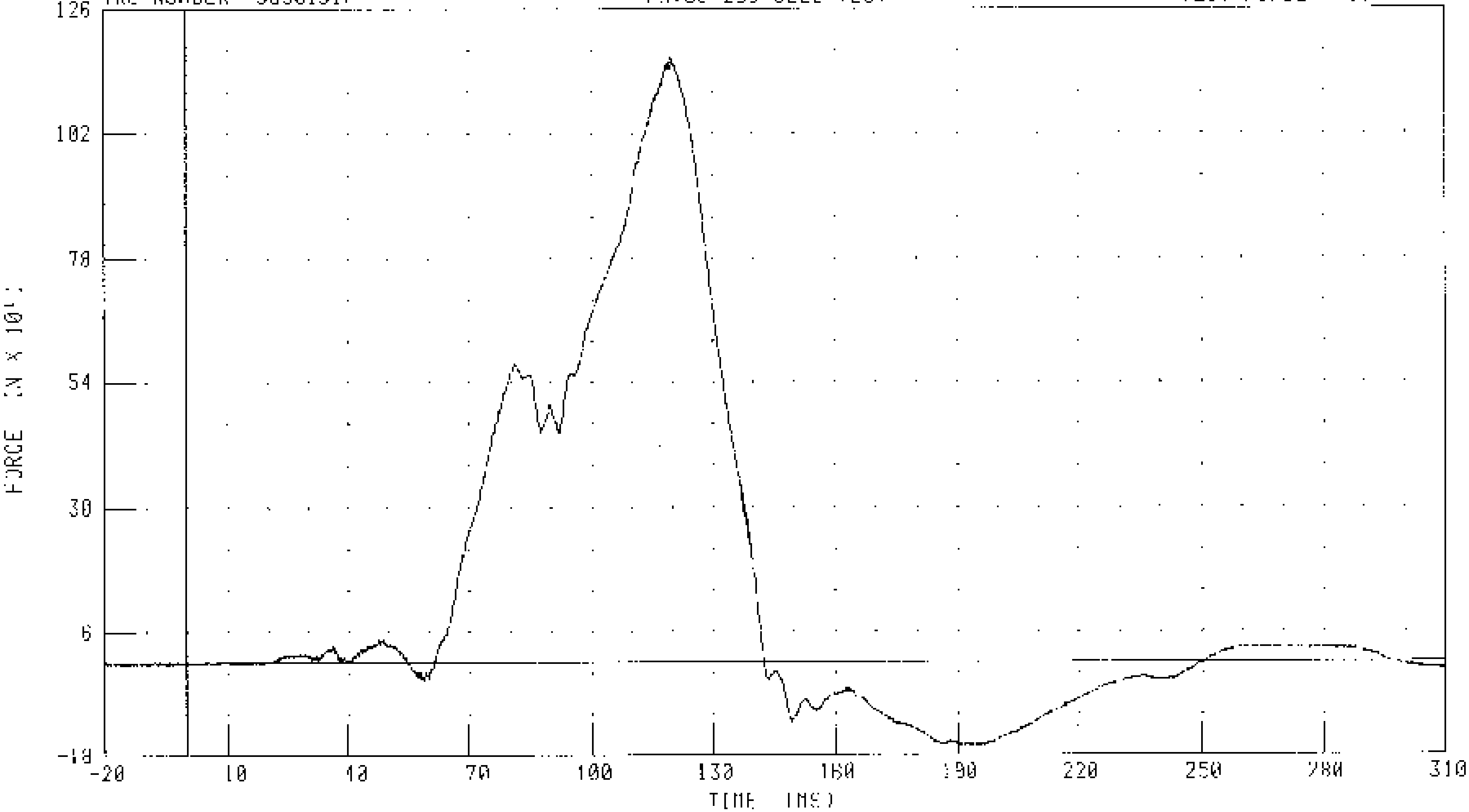


CHANNEL: HEDRC1 FILTER: CFC CLASS 1000 PEAK DATA 59.85 G @ 116.24 MS; 0.03 G @ -20.00 MS

C30203 / 2003 FORD CROWN VICTORIA
DRIVER NECK X-AXIS SHEAR FORCE
FMVSS 208 SLED TEST

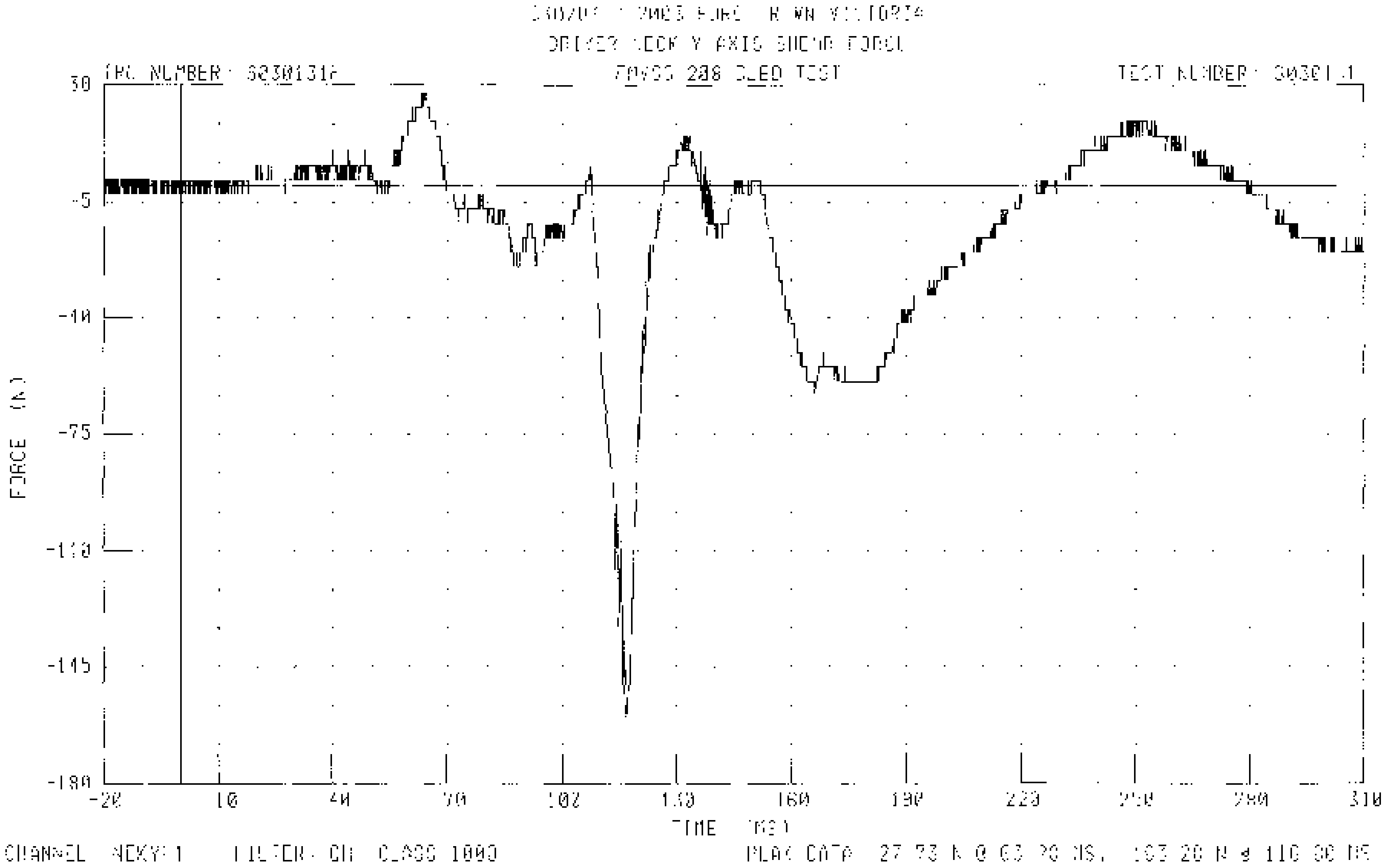
TRC NUMBER: S030131F

TEST NUMBER: S030131

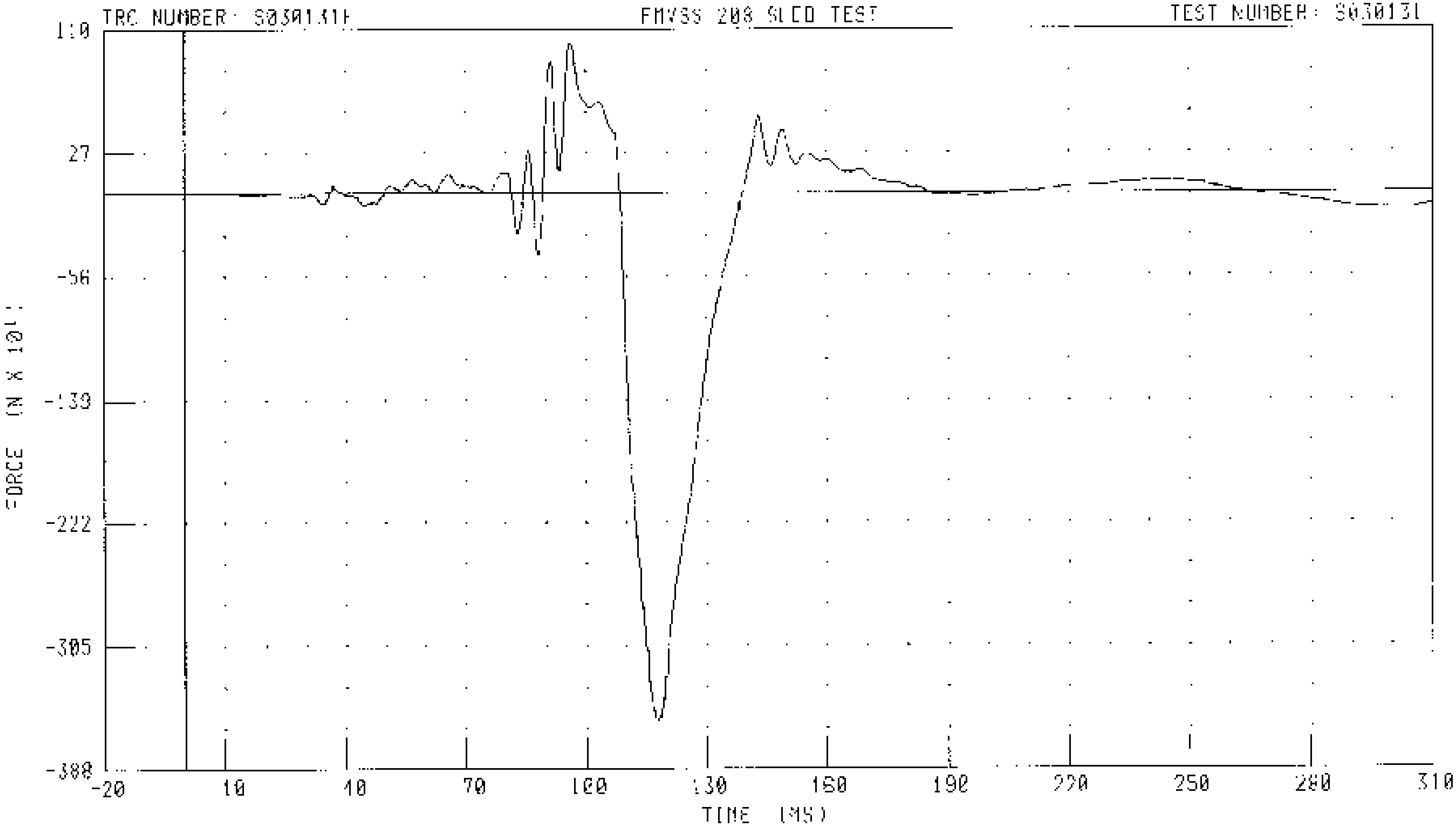


CHANNEL: NECKXF1   FILTER: CH CLASS 1000

PEAK DATA: 1166.31 N @ 119.92 MS; -151.04 N @ 190.64 MS


030703 : 2003 FORD CROWN VICTORIA
DRIVER NECK Y AXIS SHEAR FORCE
FMVSS 208 SLED TEST
TRC NUMBER: 0030131A
TEST NUMBER: 030131
30
-5
-40
-75
-110
-145
-180
FORCE (N)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: NECKY1
FILTER: CH CLASS 1000
PEAK DATA: 27.73 N @ 63.20 MS, -163.20 N @ 116.30 MS

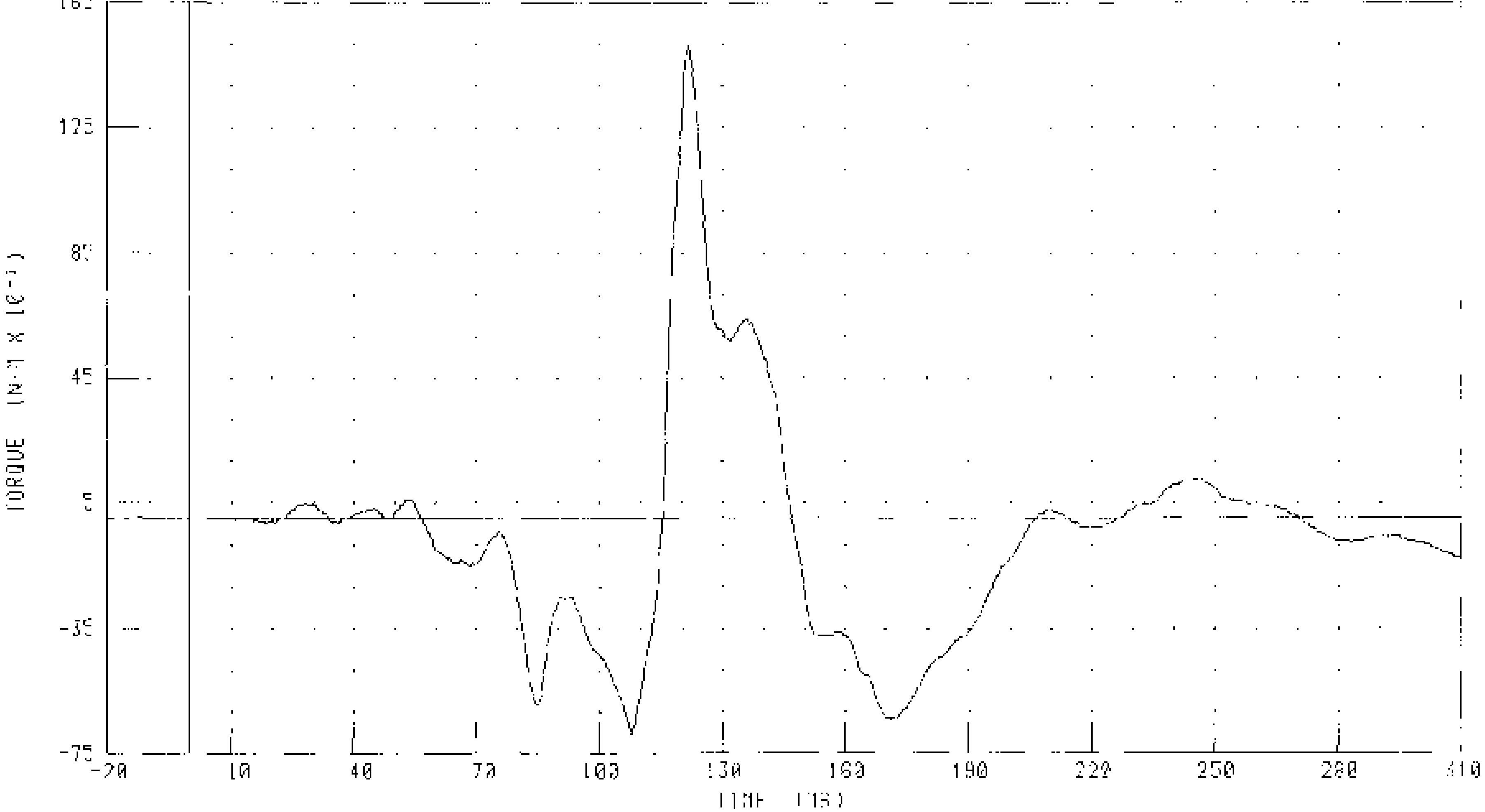
C30203 / 2003 FORD CROWN VICTORIA
DRIVER NECK Z-AXIS AXIAL FORCE
FMVSS 208 SLED TEST



CHANNEL NFKZF1 FILTER: CH CLASS 1000 PEAK DATA 1009.99 N @ 96.32 MS, 3551.52 N @ 117.84 MS

030205 / 2003 FORD CROWN VICTORIA
DRIVER NECK MOMENT ABOUT X AXIS

TRC NUMBER: S030131F FMVSS 208 SLED TEST TEST NUMBER S030131

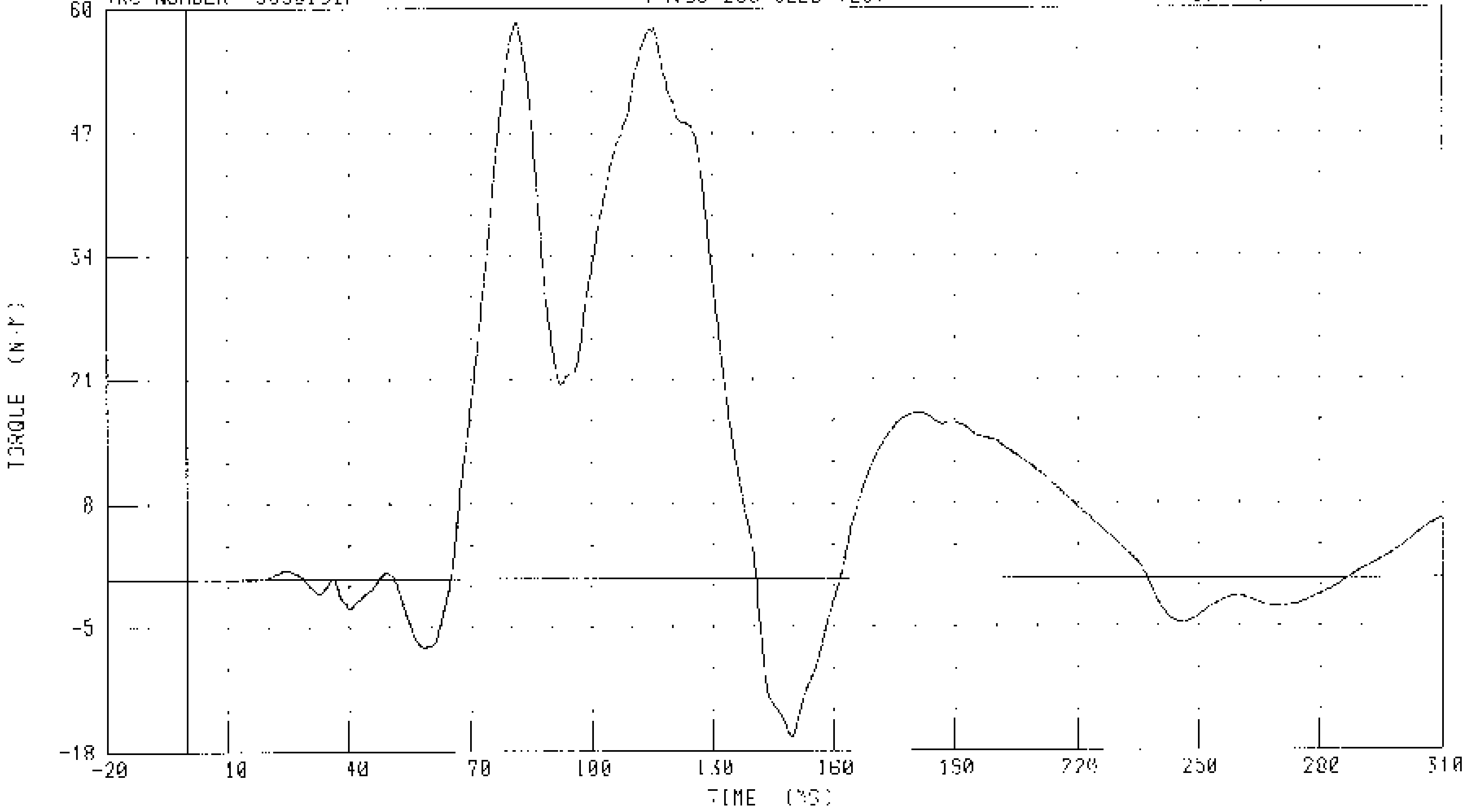


CHANNEL: NLKXM1 FILTER: CH CLASS 600 PEAK DATA 15.12 N-M @ 121.84 MS, 6.80 N-M @ 107.04 MS

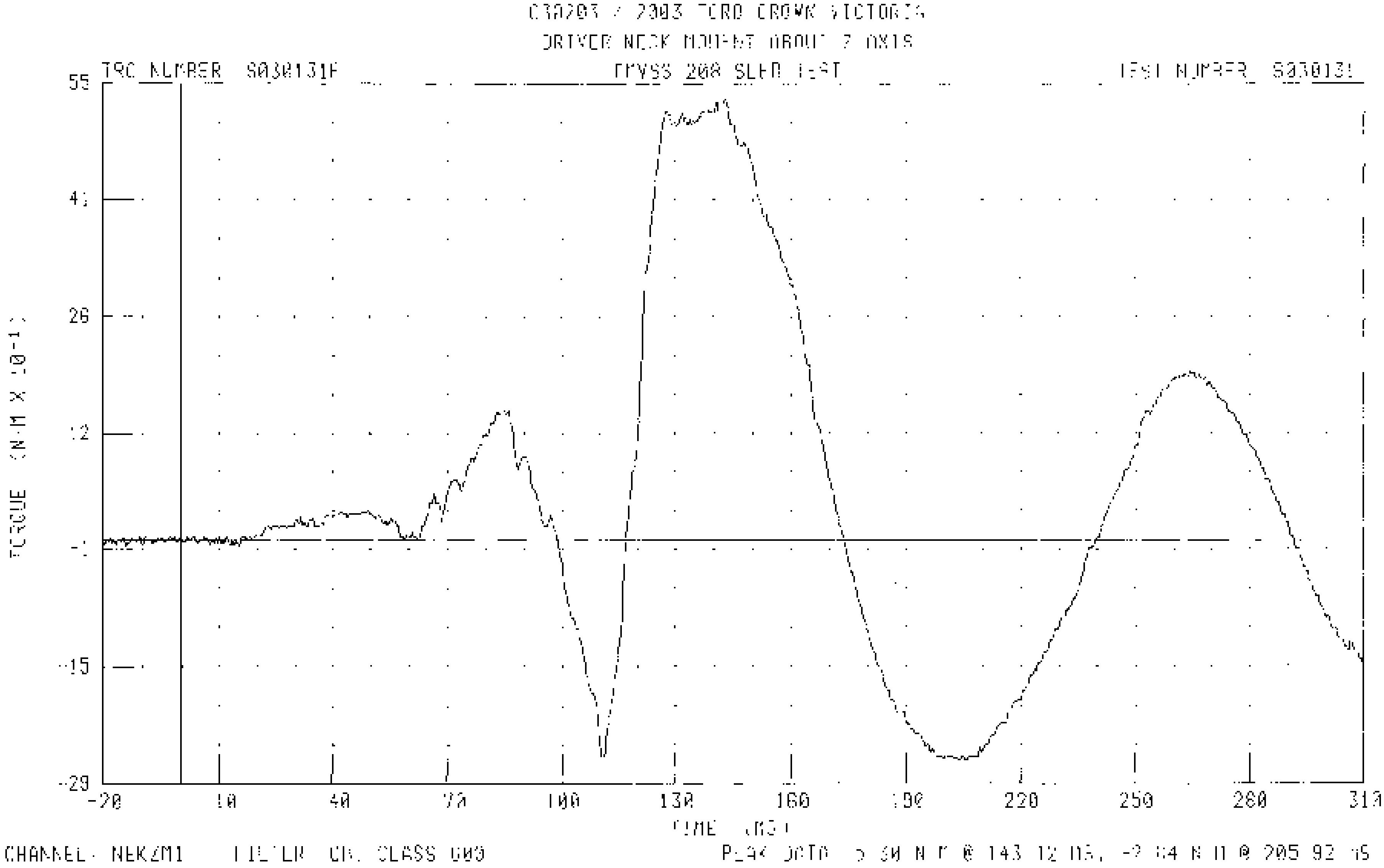
C30203 / 2003 FORD CROWN VICTORIA
DRIVER NECK MOMENT ABOUT Y AXIS
FMVSS 208 SLED TEST

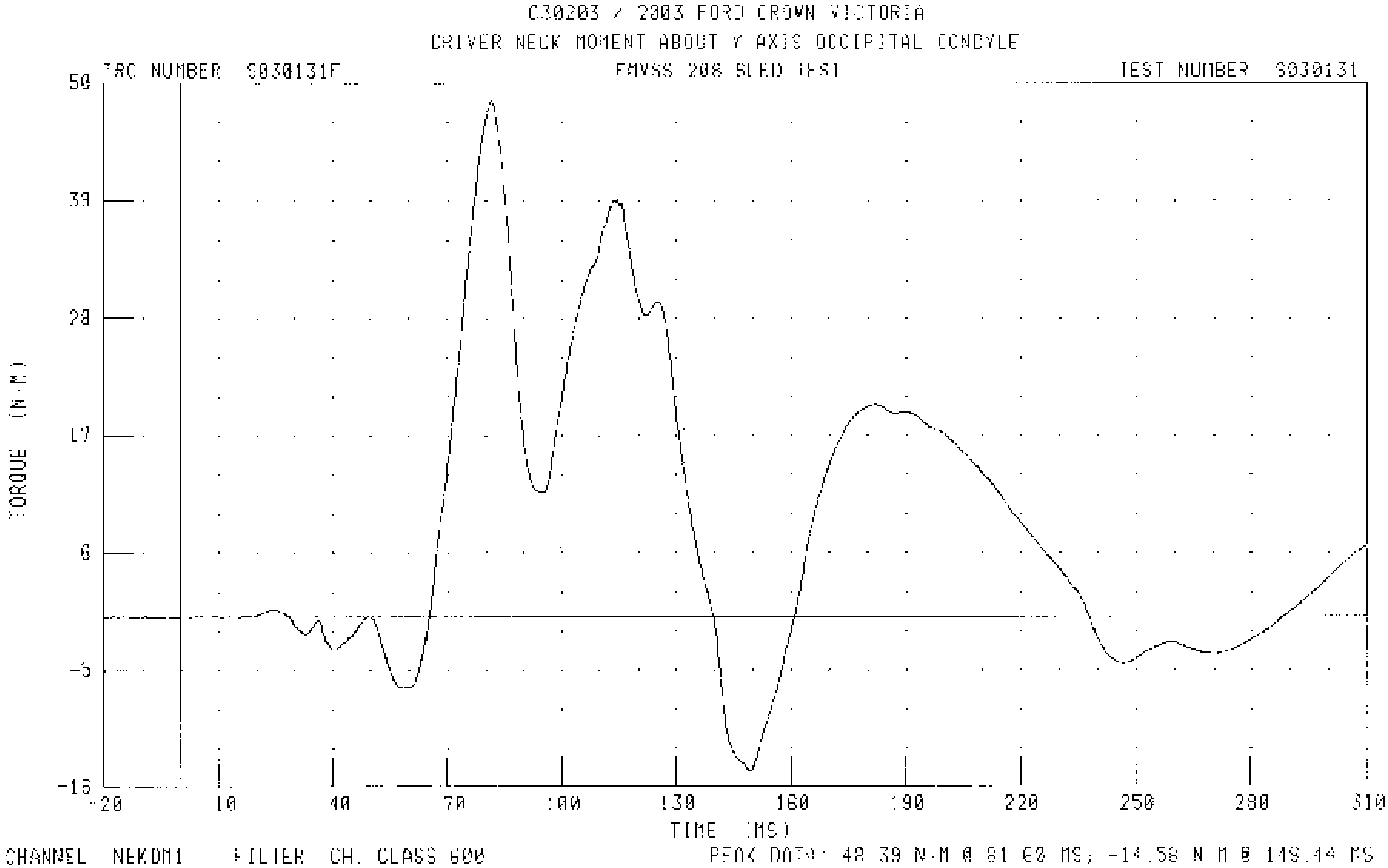
TRC NUMBER S030131F

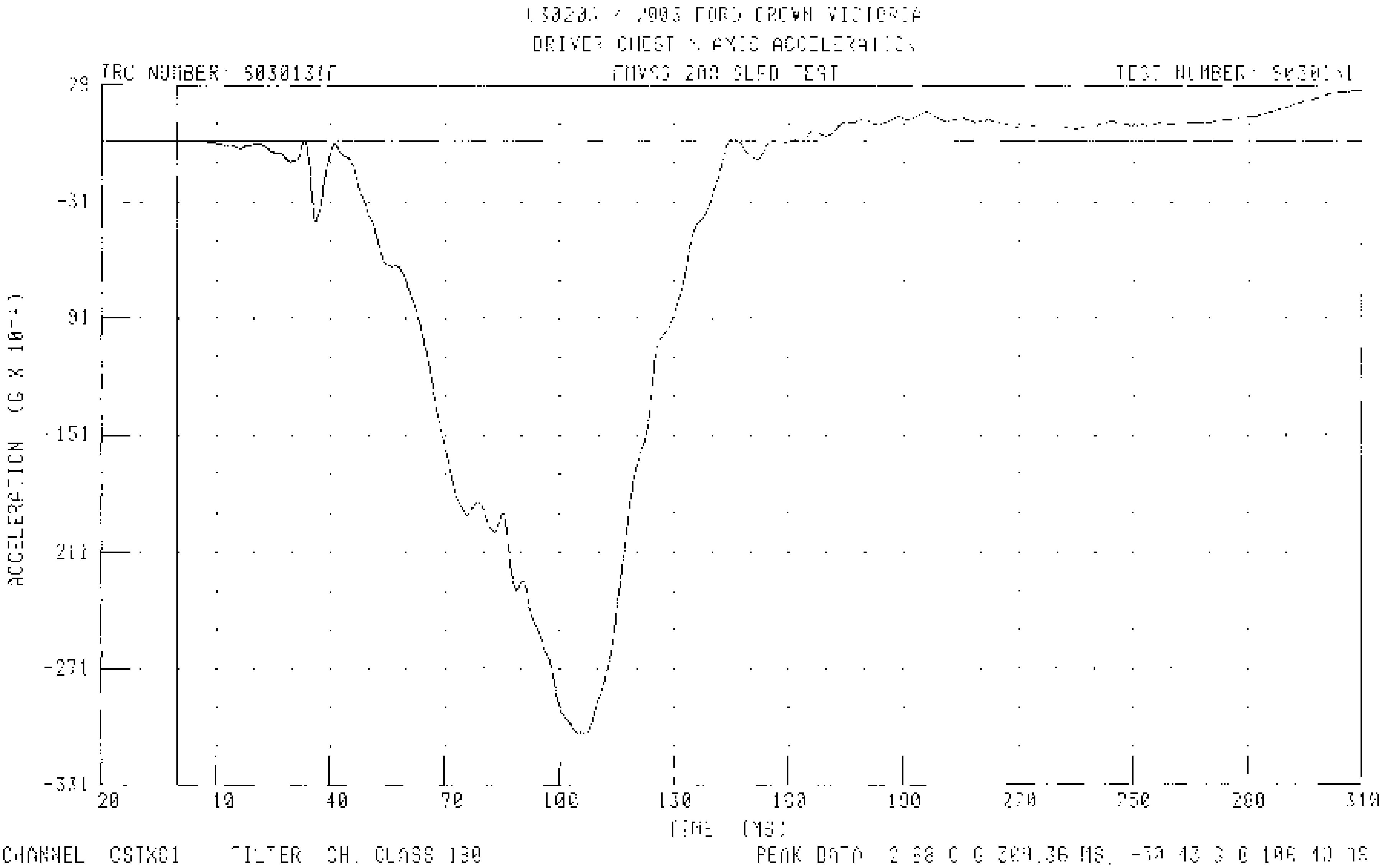
TEST NUMBER S030131



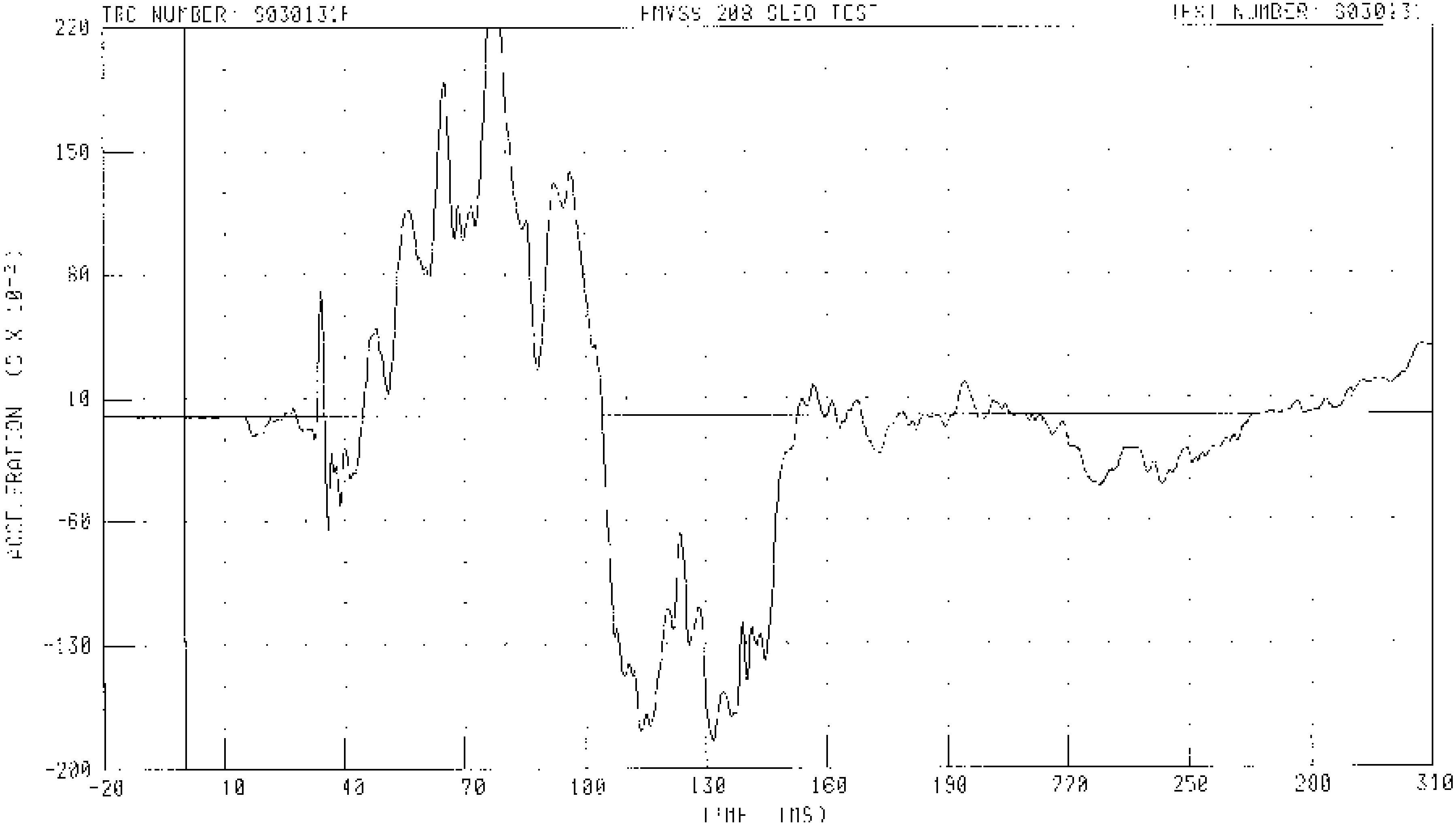
CHANNEL: NEKYM1 FILTER: CH CLASS 600 PEAK DATA 58.34 N-M @ 81.60 MS, 16.58 N-M @ 149.52 MS


C30203 / 2003 FORD CROWN VICTORIA
DRIVER NECK MOMENT ABOUT Z AXIS
TRC NUMBER S030131F
FMVSS 208 SLED TEST
TEST NUMBER S030131
55
41
26
12
-1
-15
-29
TORQUE (N-M X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: NEKZM1
FILTER: CH. CLASS 600
PEAK DATA: 5.30 N-M @ 143.12 MS, -2.84 N-M @ 205.92 MS


C30203 / 2003 FORD CROWN VICTORIA
DRIVER NECK MOMENT ABOUT Y AXIS OCCIPITAL CONDYLE
FMVSS 208 SLED TEST
TRC NUMBER S030131F
TEST NUMBER S030131
TORQUE (N·M)
50
39
28
17
6
-5
-16
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL NEKDM1
FILTER CH. CLASS 600
PEAK DATA: 48.39 N·M @ 81.60 MS; -14.58 N·M @ 149.44 MS

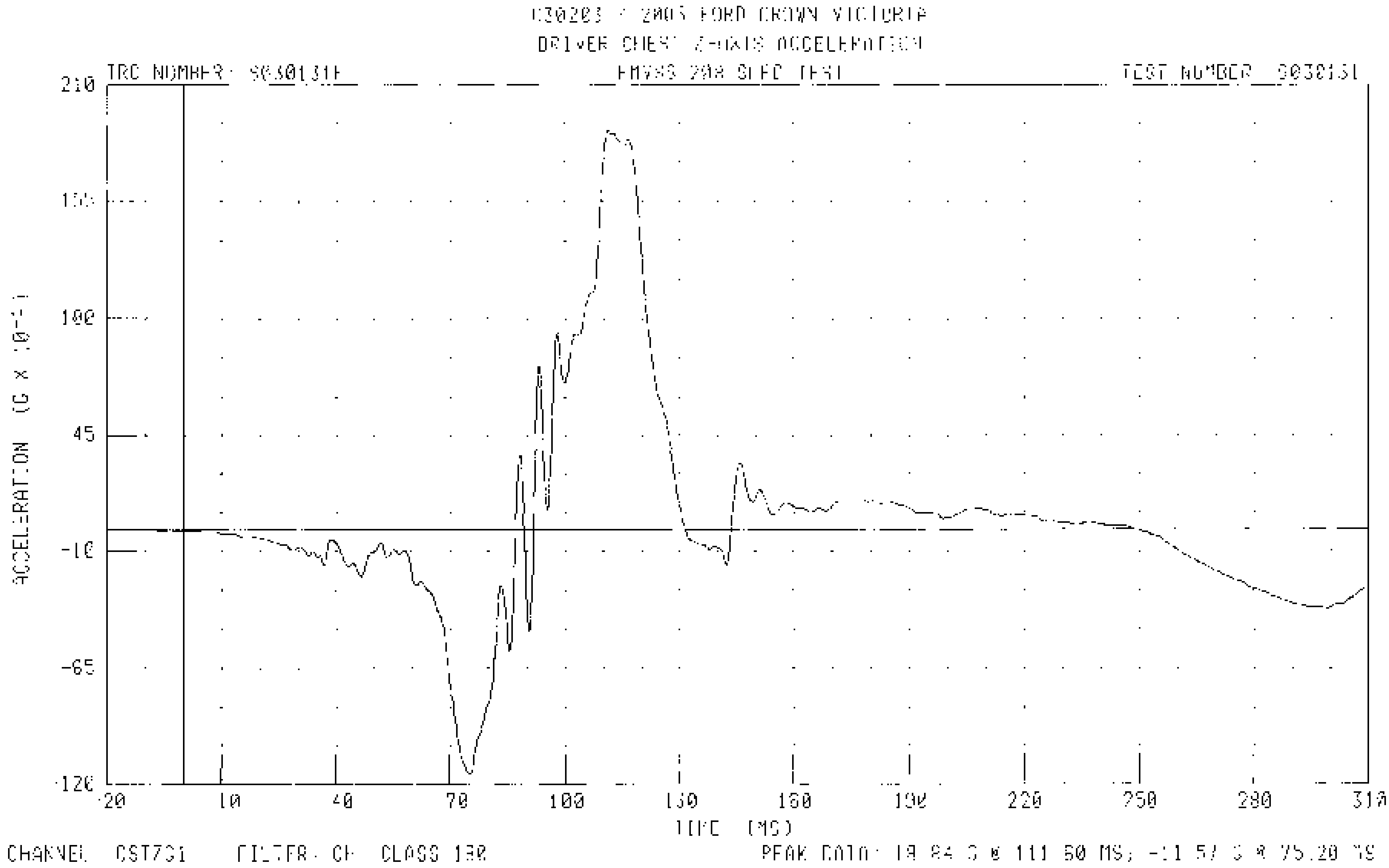

030131 / 2003 FORD CROWN VICTORIA
DRIVER CHEST X AXIS ACCELERATION
FMVSS 208 SLED TEST
TRC NUMBER: 5030131F
TEST NUMBER: SK30131
ACCELERATION (G X 10-1)
29
-31
-91
-151
-211
-271
-331
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL CSTXC1
FILTER CH. CLASS 180
PEAK DATA 2.98 G @ 209.36 MS, -30.43 G @ 106.40 MS

C30203 / 2003 FORD CROWN VICTORIA
DRIVER CHEST Y-AXIS ACCELERATION

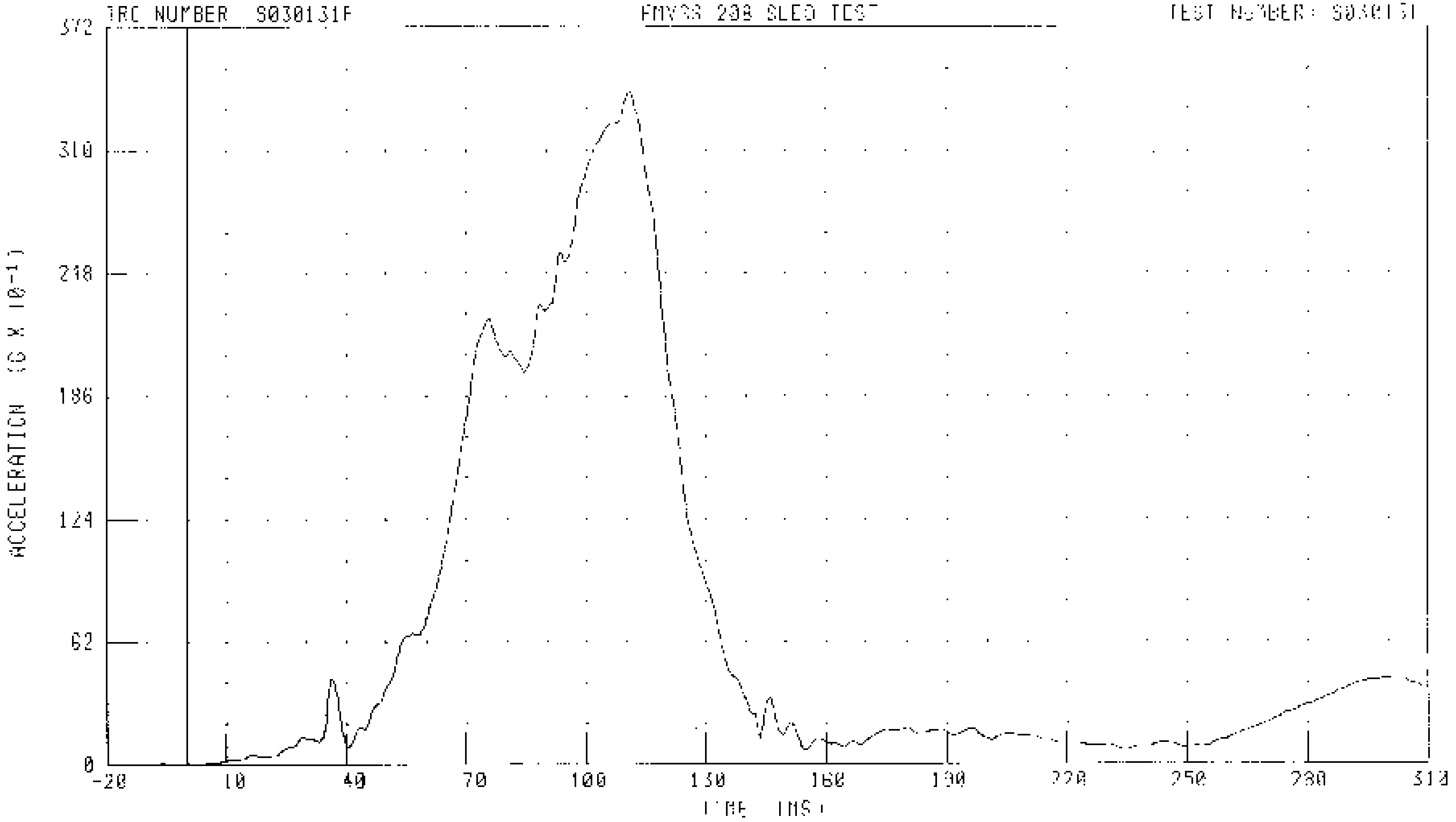


CHANNEL: CSTYG1 FILTER CH. CLASS 180

PEAK DATA: 2.52 G @ 76.88 MS; -1.85 G @ 131.68 MS

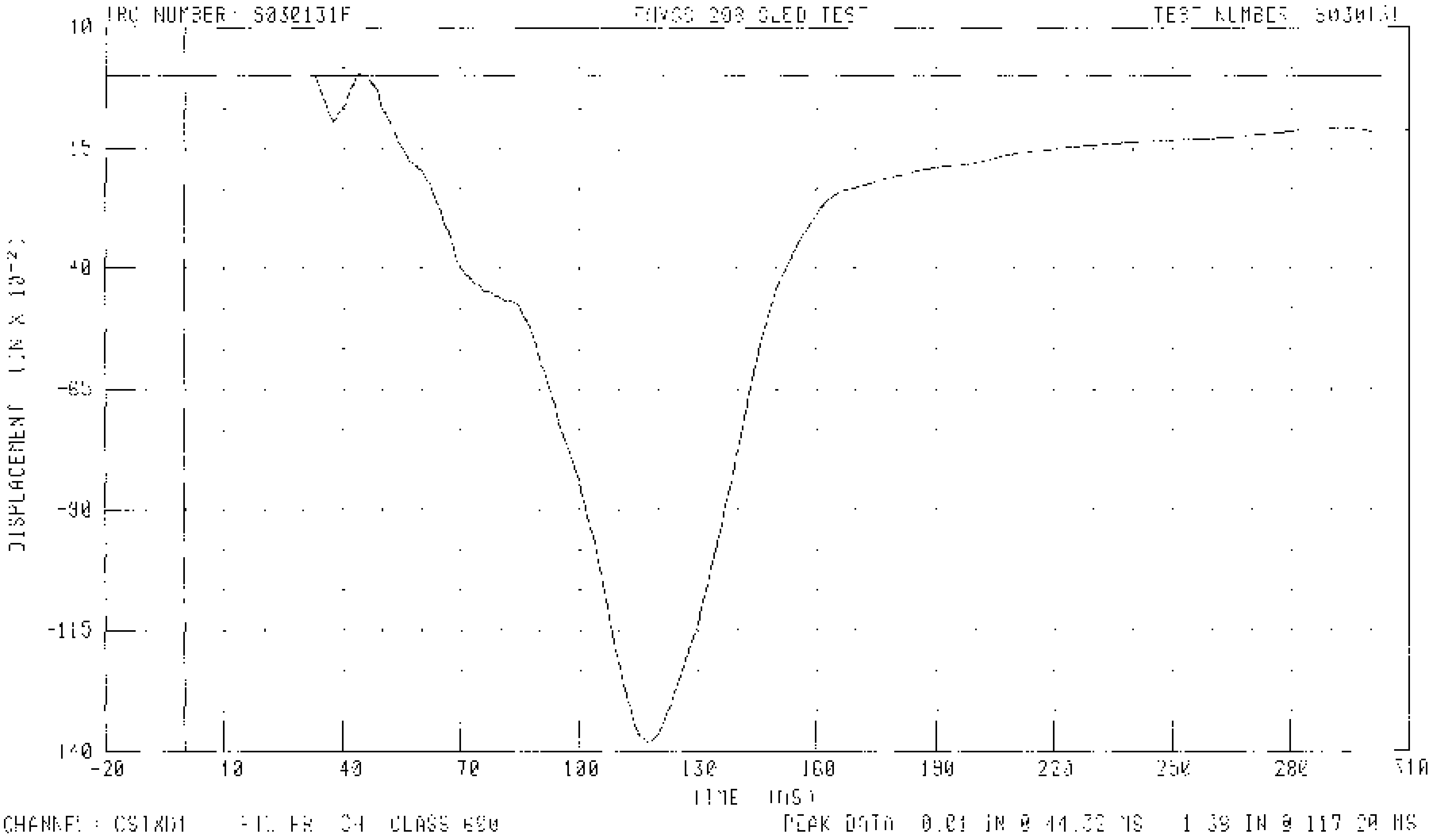

030203 - 2005 FORD CROWN VICTORIA
DRIVER CHEST Z-AXIS ACCELERATION
FMVSS 208 SLED TEST
TRC NUMBER: 9030131F
TEST NUMBER 3030131
ACCELERATION (G x 10^-1)
210
155
100
45
-10
-65
-120
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL CST731
FILTER: CH CLASS 180
PEAK DATA: 19.84 G @ 111.50 MS; -11.57 G @ 75.20 MS

C30203 / 2003 FORD CROWN VICTORIA
DRIVER CHEST RESULTANT ACCELERATION
FMVSS 208 SLED TEST



CHANNEL: CSTRS1 FILTER: CH CLASS 180 PEAK DATA: 34.96 G @ 111.12 MS, 0.00 G @ -19.32 MS

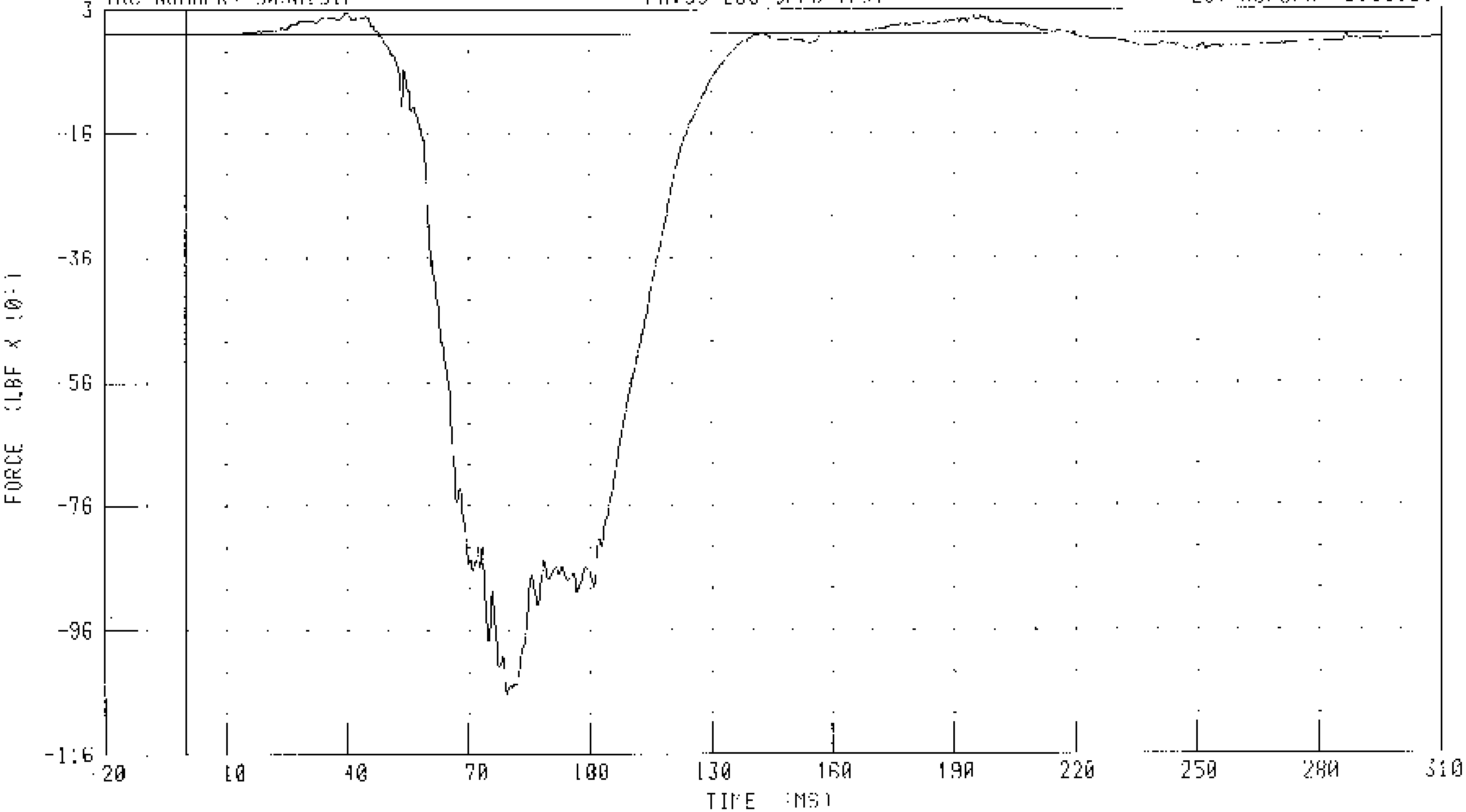
C30203 - 2003 FORD CROWN VICTORIA
DRIVER CHEST DEFLECTION
FMVSS 208 SLED TEST



C30203 / 2003 FORD CROWN VICTORIA
DRIVER LEFT FEMUR FORCE
FMVSS 208 SLED TEST

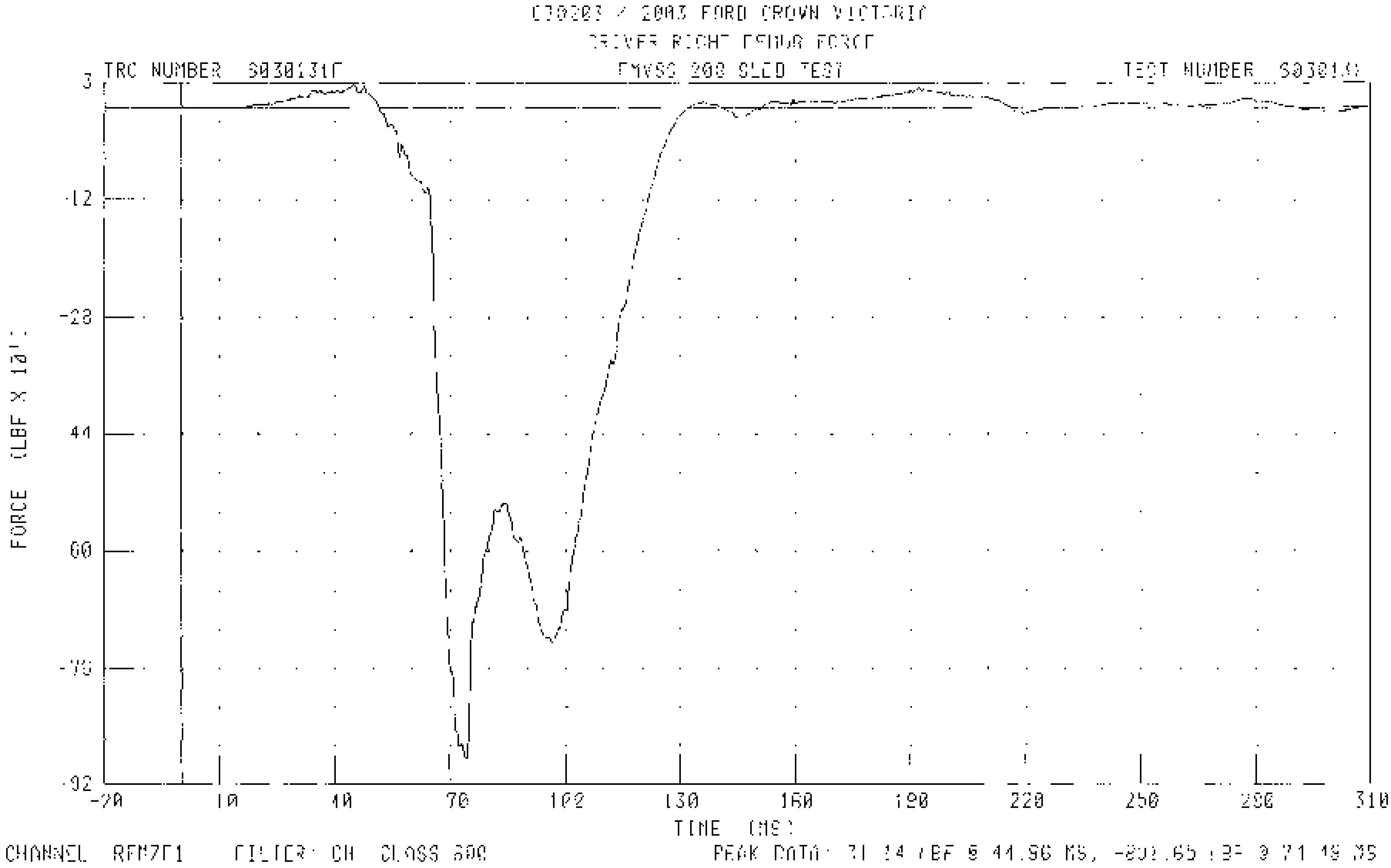
TRC NUMBER: S030131F

TEST NUMBER: S030131



CHANNEL LFMZF1   FILTER CH CLASS 600

PEAK DATA: 30.27 LBF @ 39.84 MS; -1063.12 LBF @ 79.60 MS


C30203 / 2003 FORD CROWN VICTORIA
DRIVER RIGHT FEMUR FORCE
FMVSS 208 SLED TEST
TRC NUMBER S030131F
TEST NUMBER S030131
FORCE (LBF X 10¹)
3
-12
-28
-44
-60
-76
-92
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL RFM7F1
FILTER: CH CLASS 600
PEAK DATA: 31.14 LBF @ 44.96 MS, -802.65 LBF @ 71.19 MS

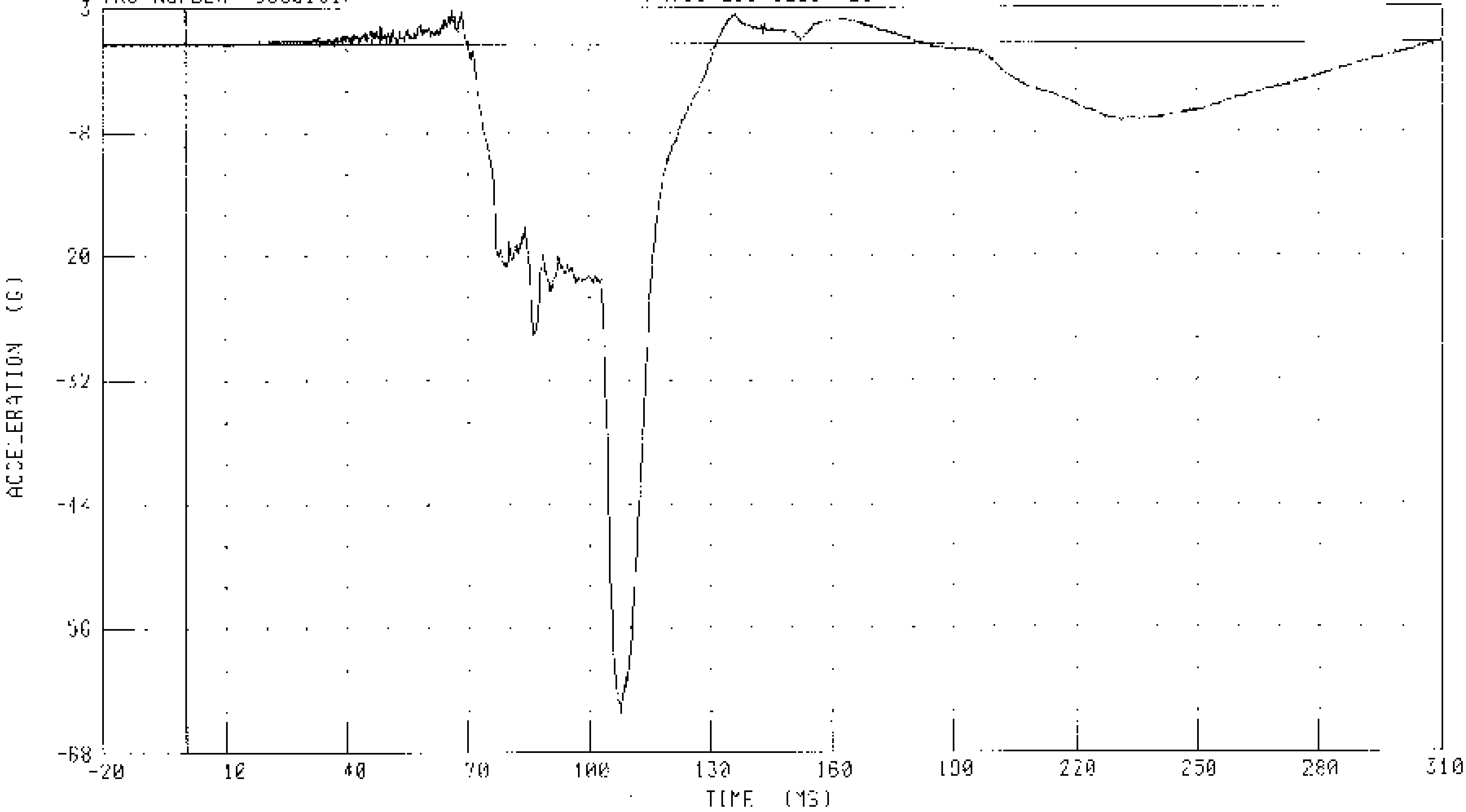
C30203 / 2003 FORD CROWN VICTORIA

RIGHT FRONT PASSENGER HEAD X AXIS ACCELERATION

TRC NUMBER S030131F

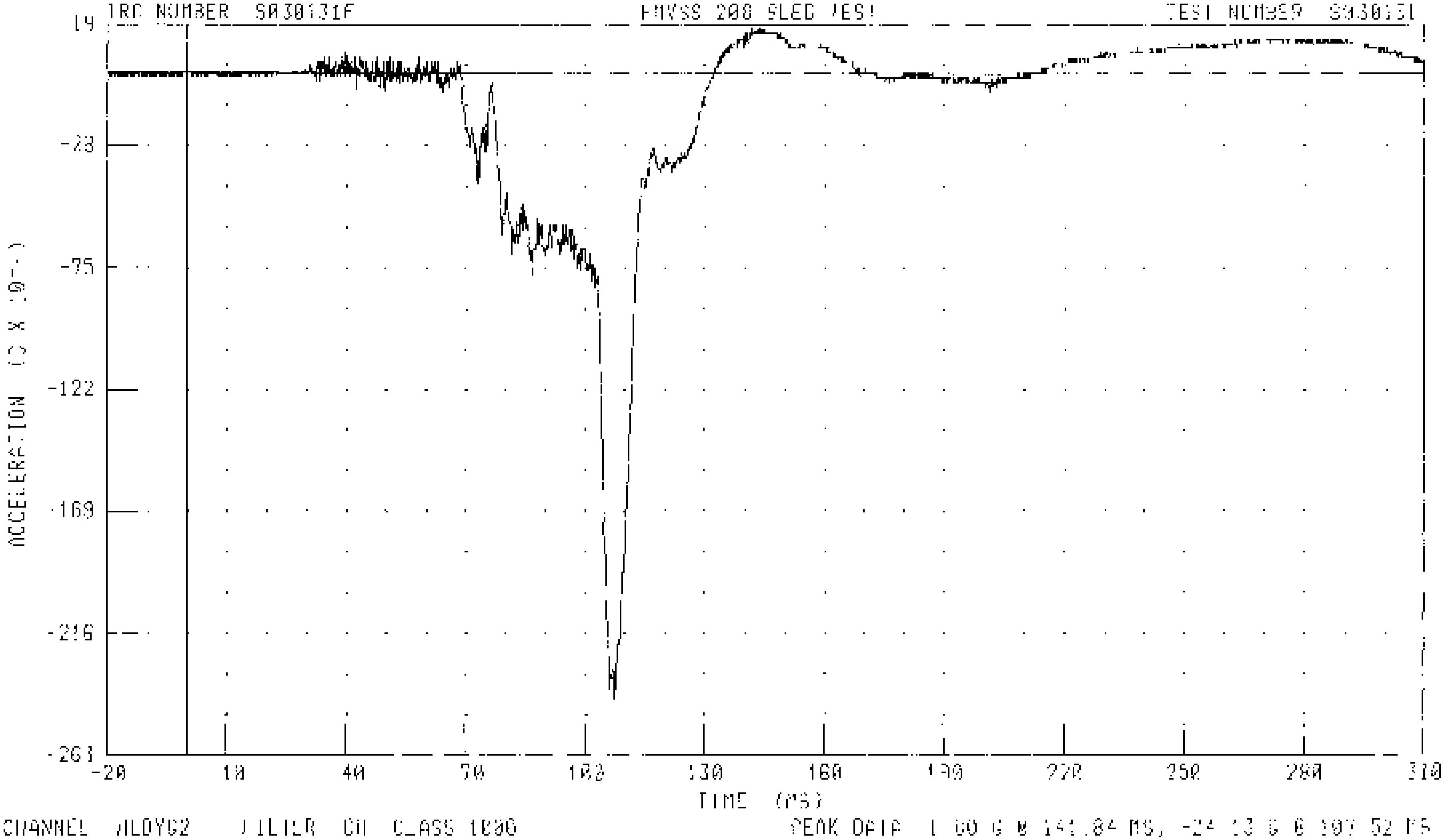
FMVSS 208 SLED TEST

TEST NUMBER S030131



CHANNEL HEDXG2   FILTER: CH. CLASS 1000

PEAK DATA: 3.15 G @ 66.10 MS   64.85 G @ 107.92 MS

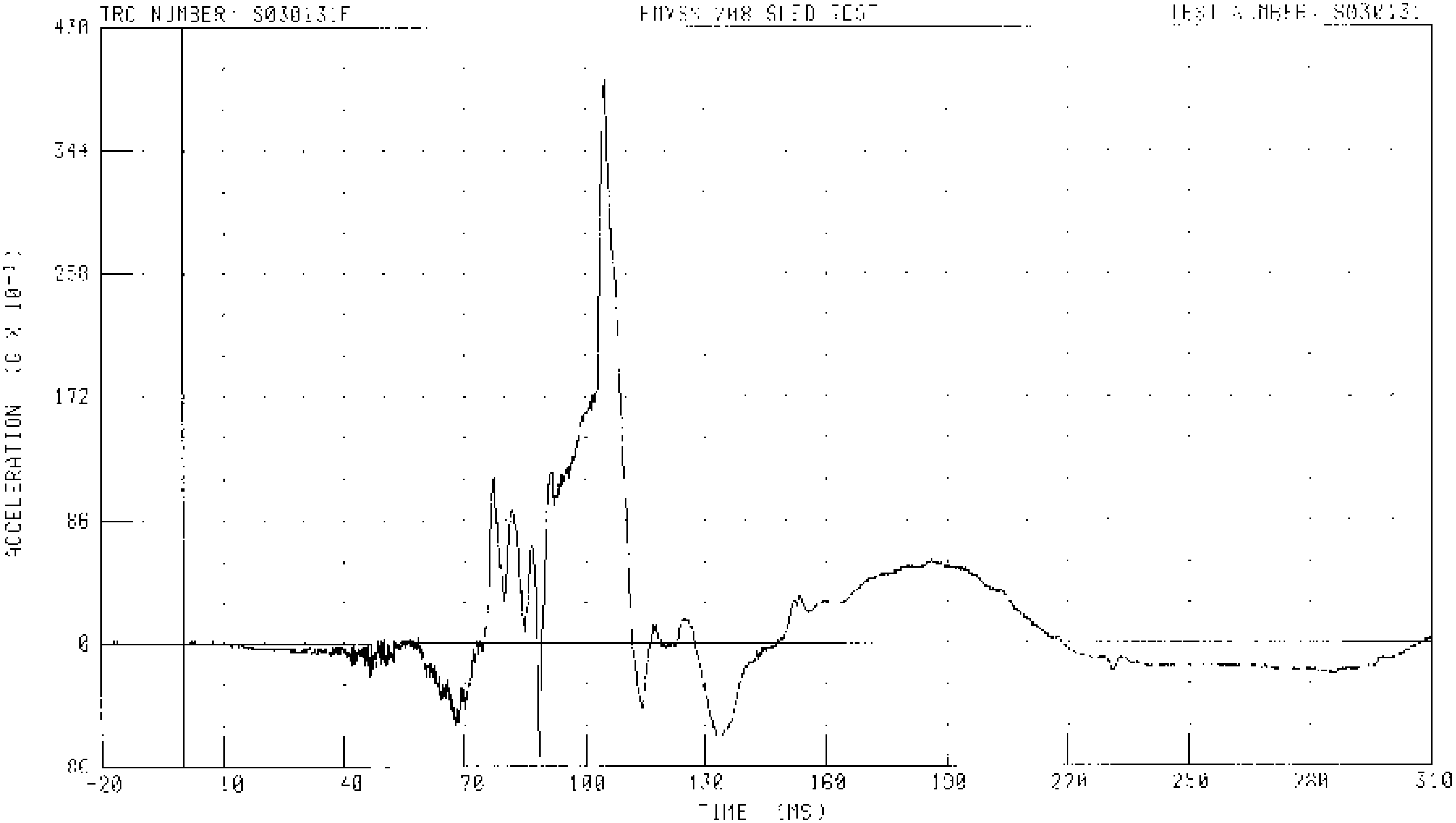


C39203 / 2003 FORD CROWN VICTORIA

RIGHT FRONT PASSENGER HEAD Y-AXIS ACCELERATION

FMVSS 208 SLED TEST

030703 - 2003 FORD CROWN VICTORIA
RIGHT FRONT PASSENGER HEAD Z-AXIS ACCELERATION
FMVSS 208 SLED TEST

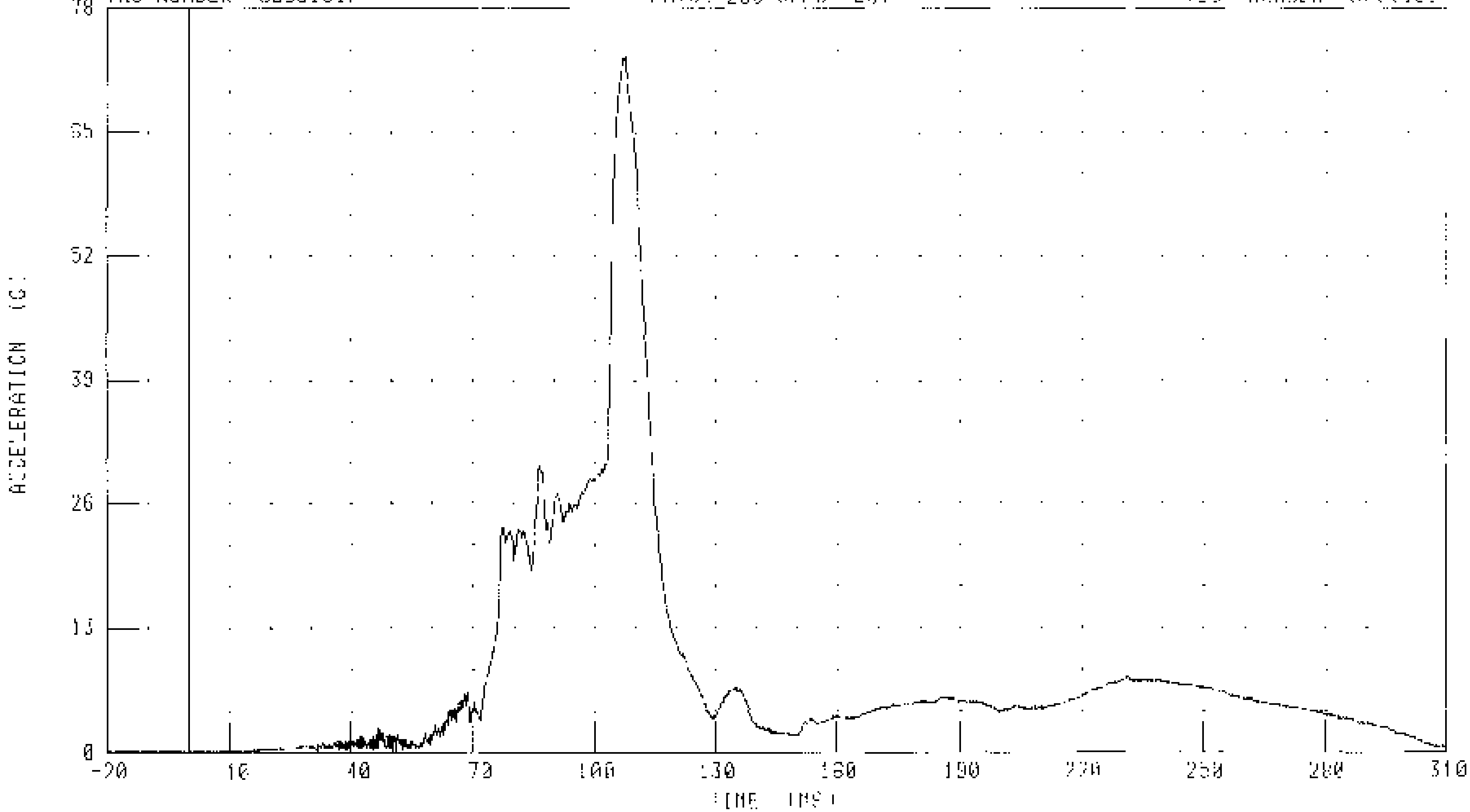


CHANNEL: HED7G2   FILTER: CH CLASS 1000   PEAK DATA 39.37 G @ 104.06 MS, -7.85 G @ 88.48 MS

C30203 / 2003 FORD CROWN VICTORIA

RIGHT FRONT PASSENGER HEAD RESULTANT ACCELERATION

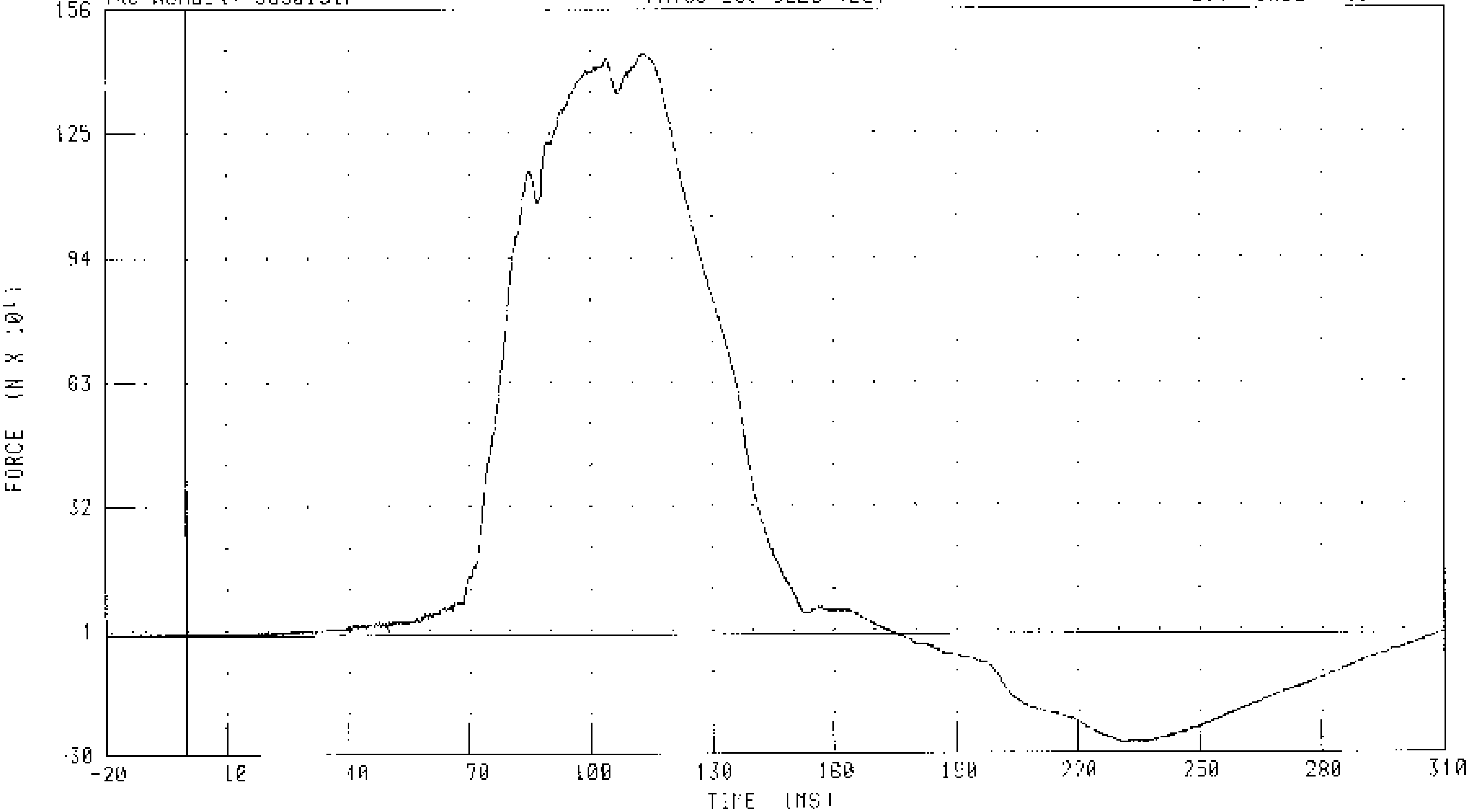
TRC NUMBER S030131F FMVSS 208 SLED TEST TEST NUMBER SN30131



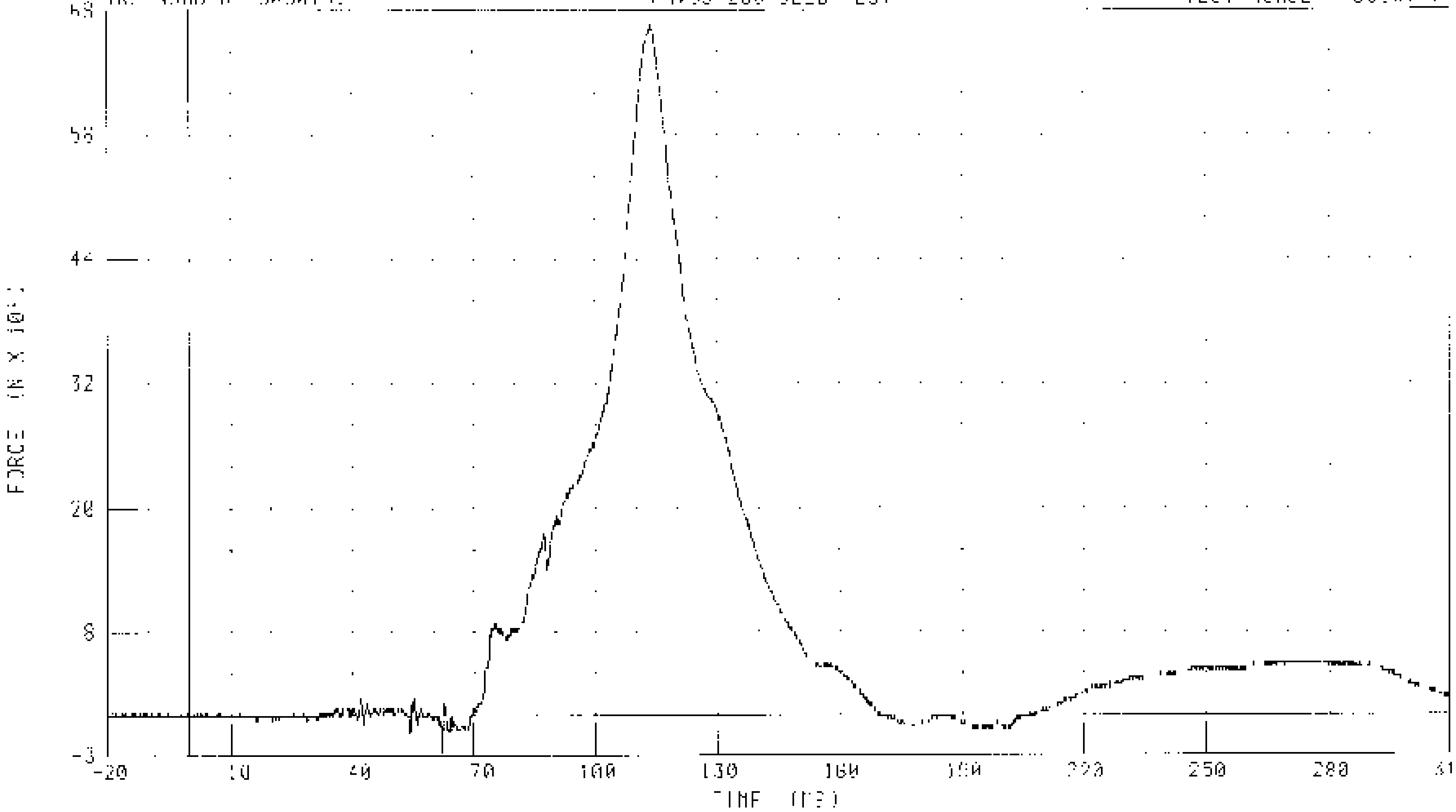
CHANNEL: HEDRG2 FILTER: CH CLASS 1000 PEAK DATA 73.22 G @ 107.92 MS, 0.00 G @ -19.92 MS

S30203 / 2003 FORD CROWN VICTORIA
RIGHT FRONT PASSENGER NECK X-AXIS SHEAR FORCE
FMVSS 208 SLED TEST

TRC NUMBER: S030131F
TEST NUMBER S030131



CHANNEL NLKXF2 FILTER CH CLASS 1000
PEAK DATA 1448.73 N @ 112.90 MS; -275.55 N @ 230.16 MS

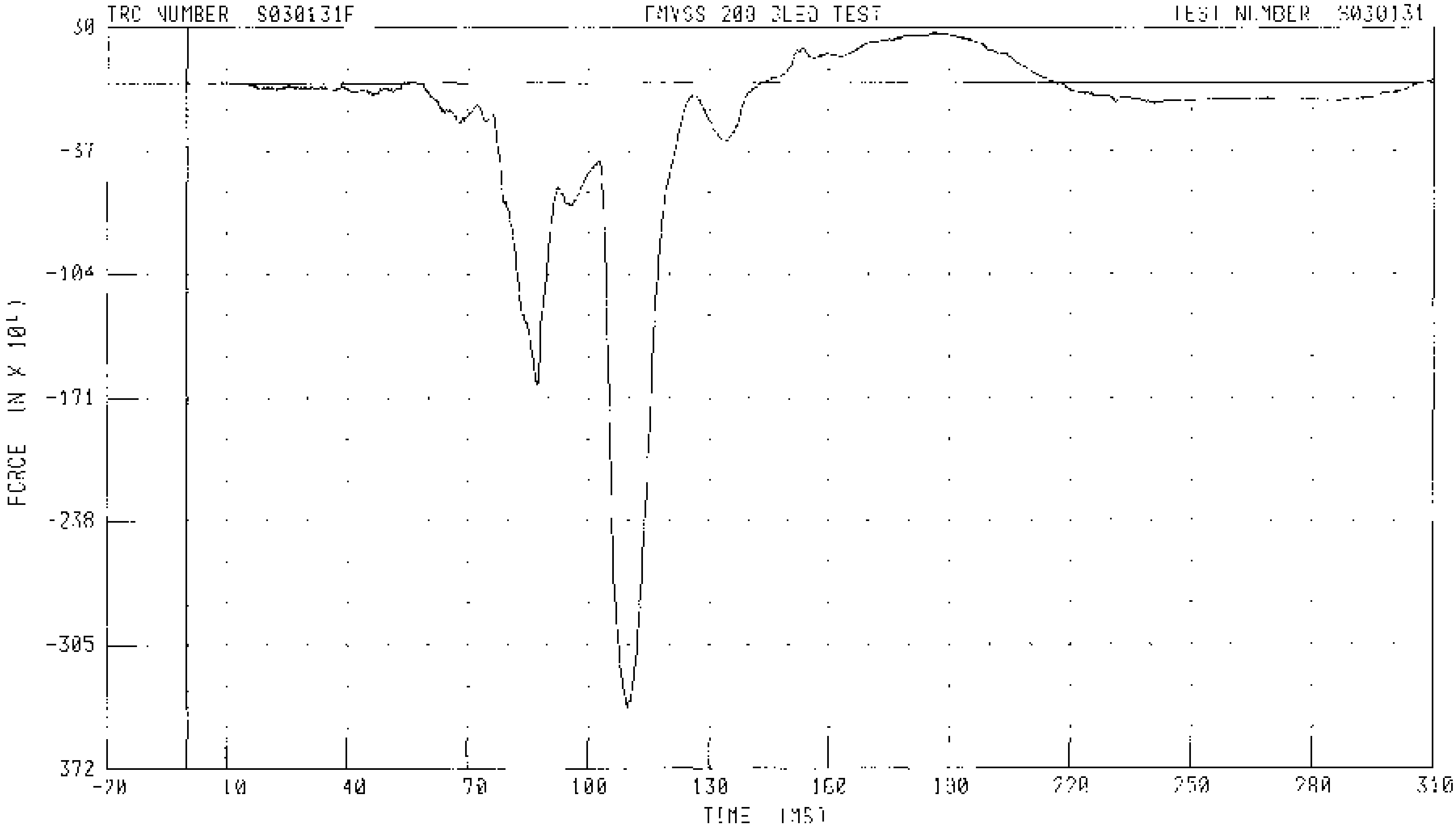


[illegible] / 2003 FORD CROWN VICTORIA
RIGHT FRONT PASSENGER NECK Y AXIS SHEAR FORCE
FMVSS 208 SLED TEST

CHANNEL NEKYF2 FILTER CF CLASS 1000

PEAK DATA: 659.04 N @ 113.02 MS, -35.21 N @ 67.16 MS

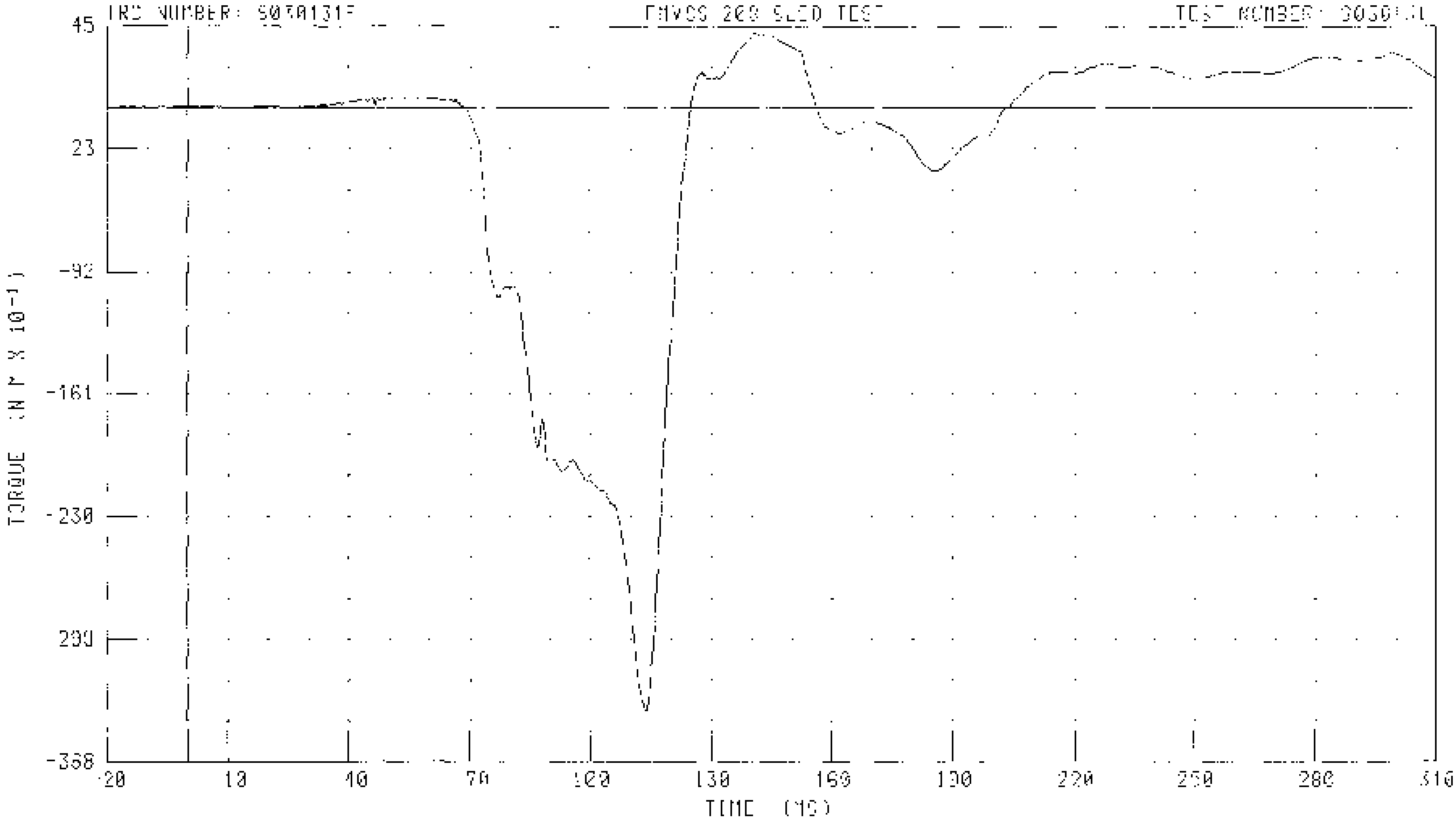
C30203 / 2003 FORD CROWN VICTORIA
RIGHT FRONT PASSENGER NECK Z-AXIS AXIAL FORCE



CHANNEL NEKZF2   FILTER CFC CLASS 1000   PEAK DATA: 271.04 N @ 100.08 MS, 3389.41 N @ 109.70 MS

C50203 - 2003 FORD CROWN VICTORIA

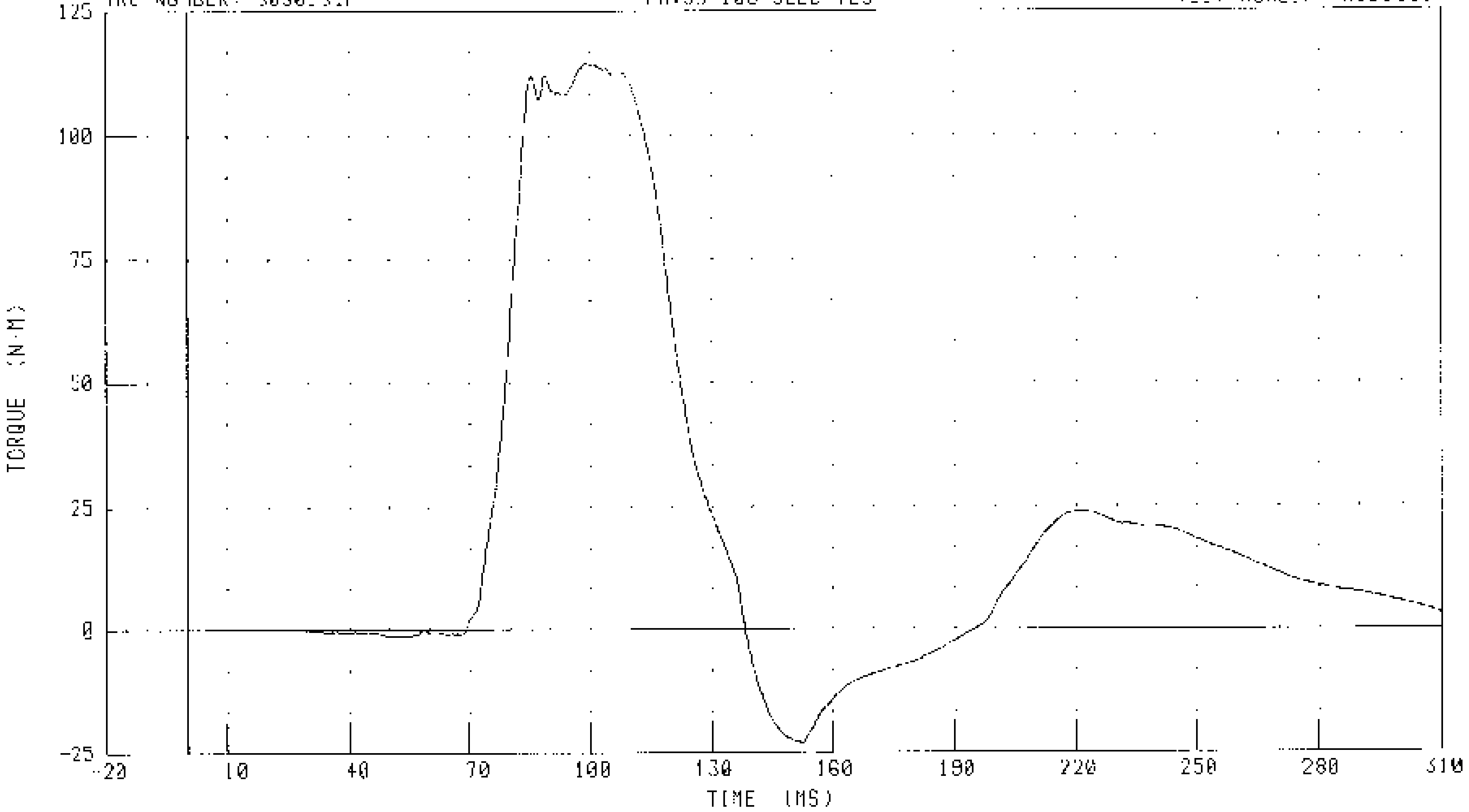
RIGHT FRONT PASSENGER NECK MOMENT ABOUT X AXIS



CHANNEL NEKXM2 FILTER CH CLASS 600 PEAK DATA 4.21 N-M @ 140.50 MS, -37.32 N-M @ 114.24 MS

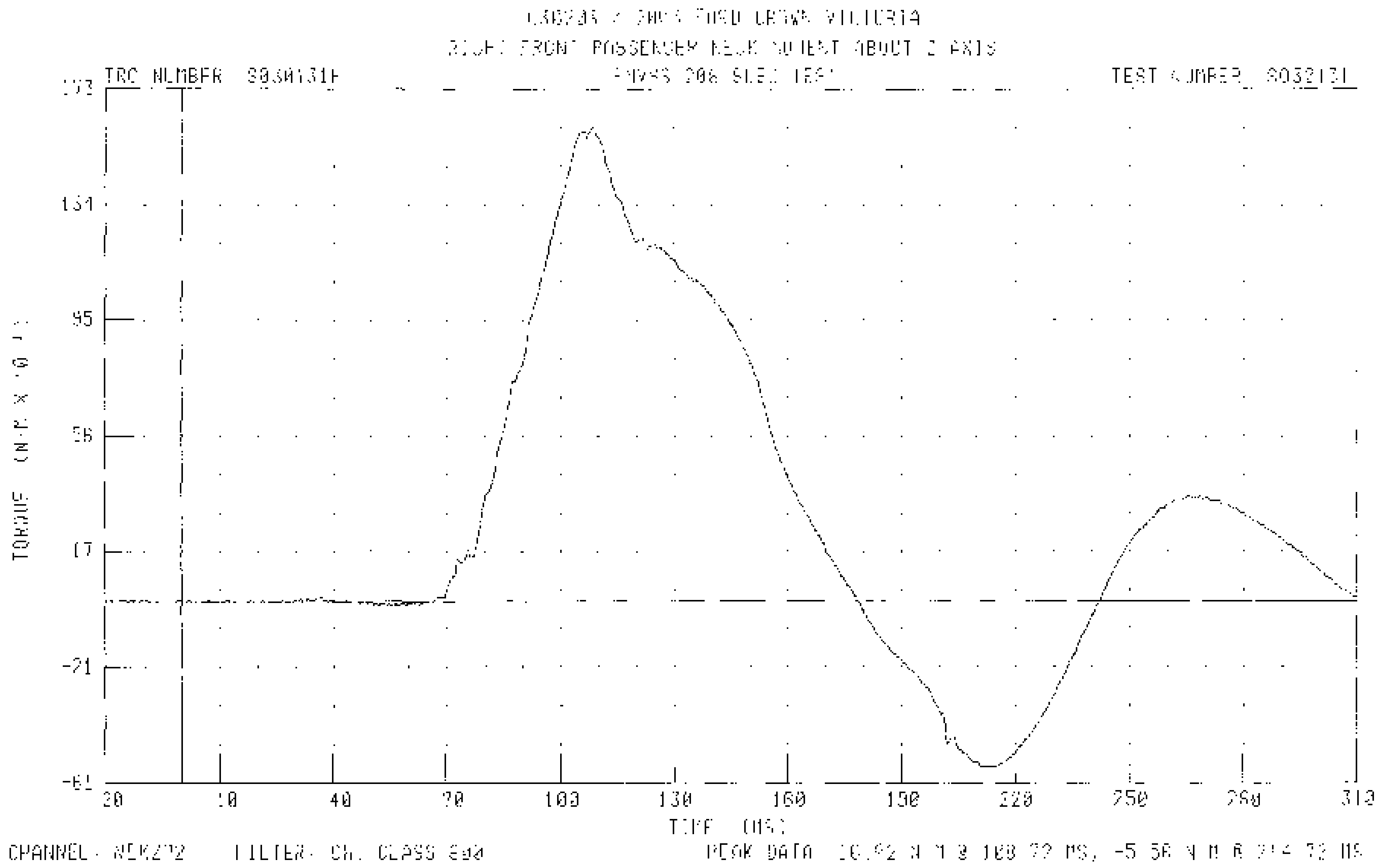
C30203 / 2003 FORD CROWN VICTORIA
RIGHT FRONT PASSENGER NECK MOMENT ABOUT Y AXIS

IRC NUMBER: S030131F
FMVSS 208 SLED TEST
TEST NUMBER: S030131



CHANNEL: NFKYM2   FILTER: CH. CLASS 600

PEAK DATA: 114.50 N·M @ 99.36 MS; -23.10 N·M @ 152.48 MS


030131 / 2003 FORD CROWN VICTORIA
RIGHT FRONT PASSENGER NECK MOMENT ABOUT Z AXIS
FMVSS 208 SLED TEST
TRC NUMBER 030131F
TEST NUMBER 030131
173
134
95
56
17
-21
-61
TORQUE (N-M X 10^-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: NEKZ72
FILTER: CH. CLASS 600
PEAK DATA 15.92 N M @ 106.72 MS, -5.56 N M @ 214.72 MS

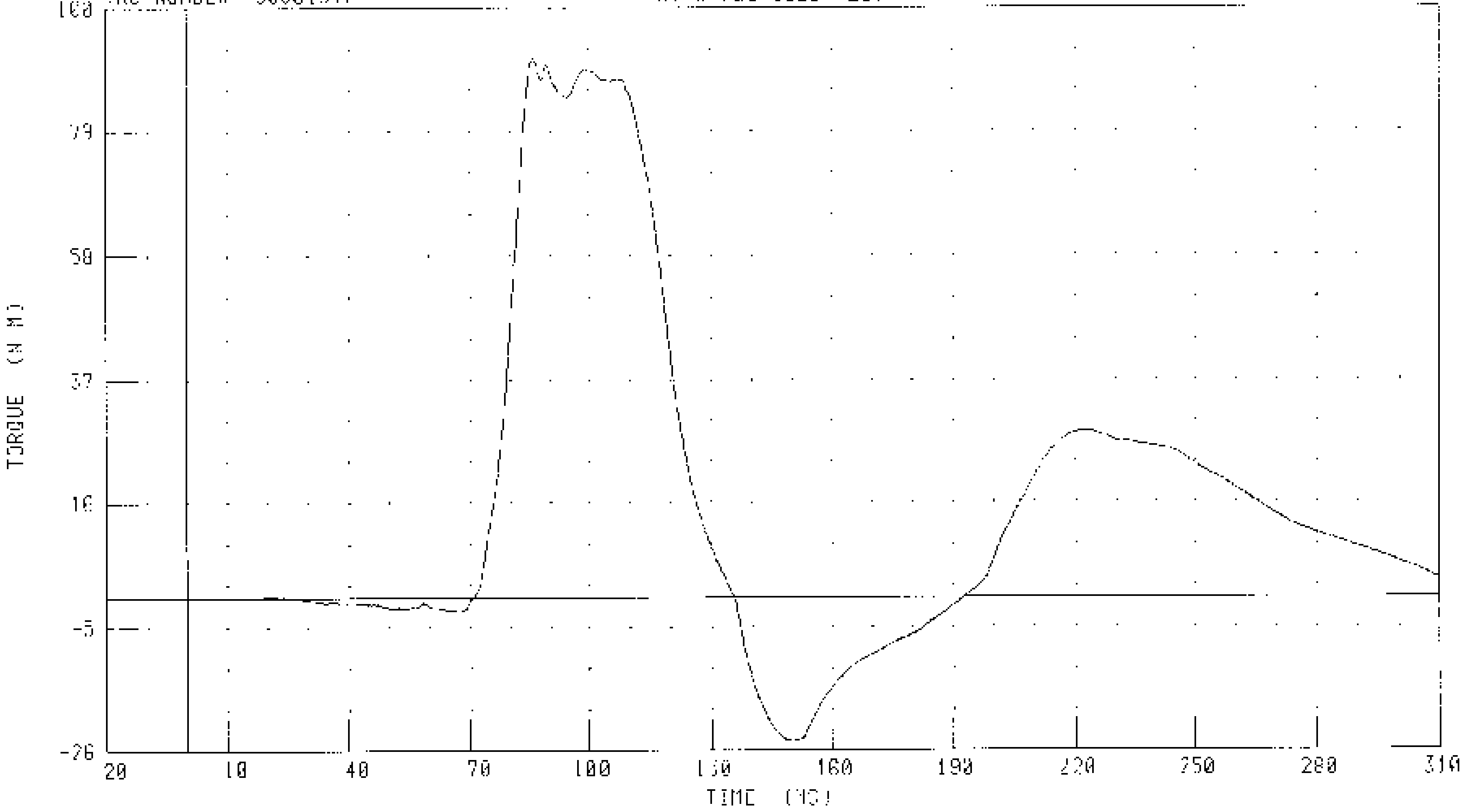
C30203 - 2003 FORD CROWN VICTORIA

RIGHT FRONT PASSENGER NECK MOMENT ABOUT Y AXIS OCCIPITAL CONDYLE

TRC NUMBER: S030131F

FMVSS 208 SLED TEST

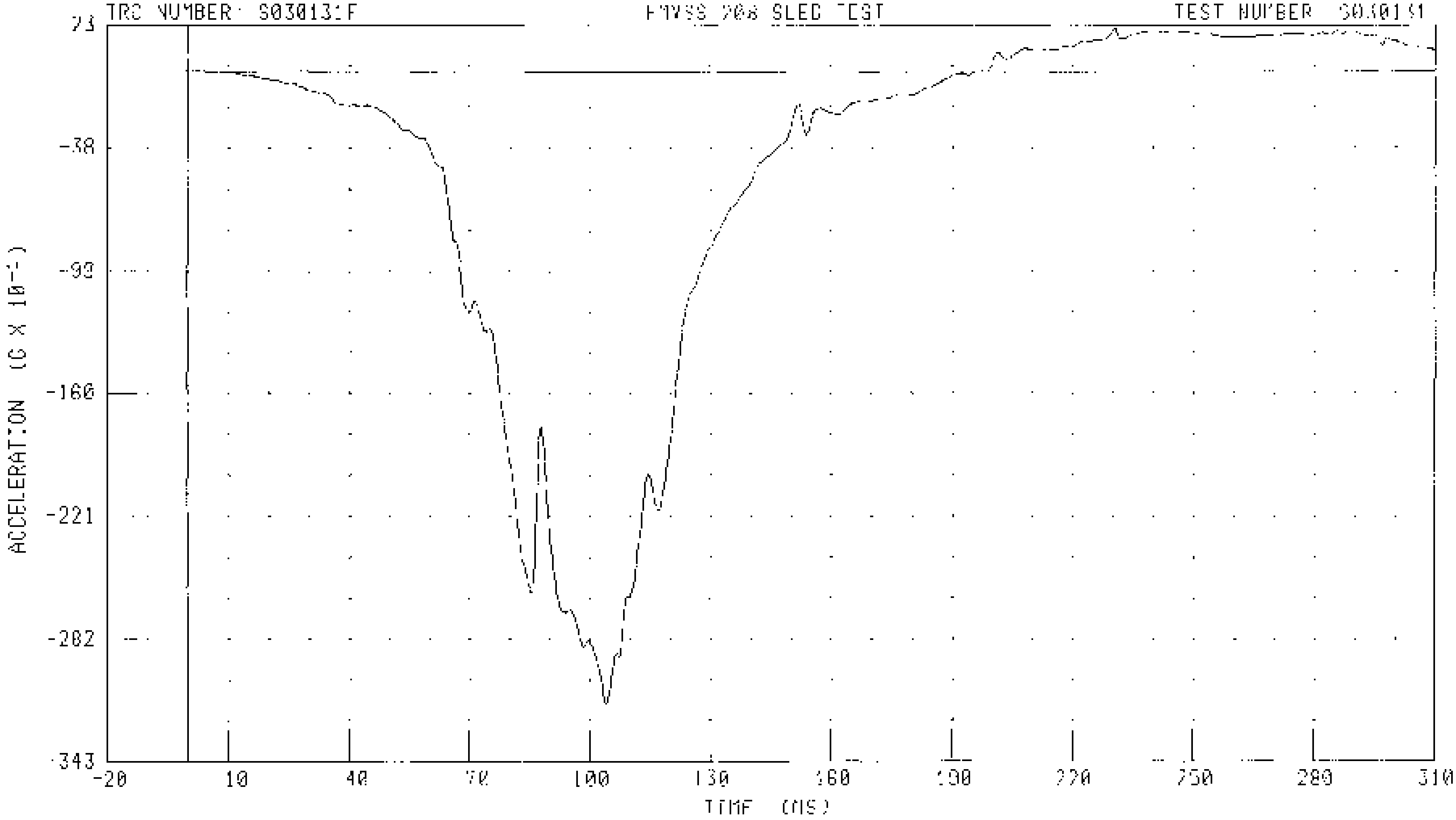
TEST NUMBER: S030131



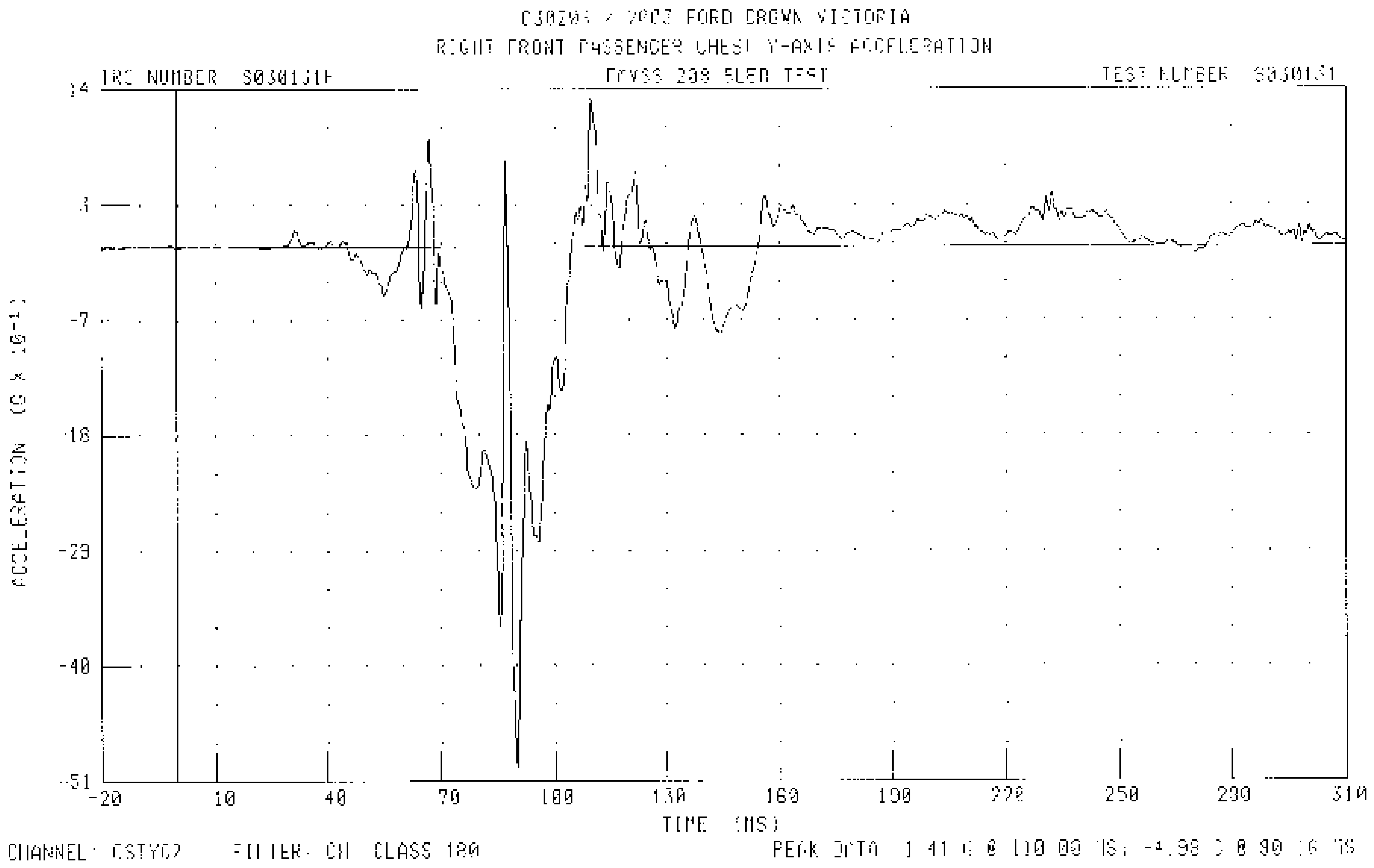
CHANNEL: NFKOM2   FILTER CH CLASS 600

PEAK DATA: 91.43 N M @ 85.84 MS, -24.49 N M @ 150.00 MS

C30203 / 2003 FORD CROWN VICTORIA
RIGHT FRONT PASSENGER CHEST X-AXIS ACCELERATION



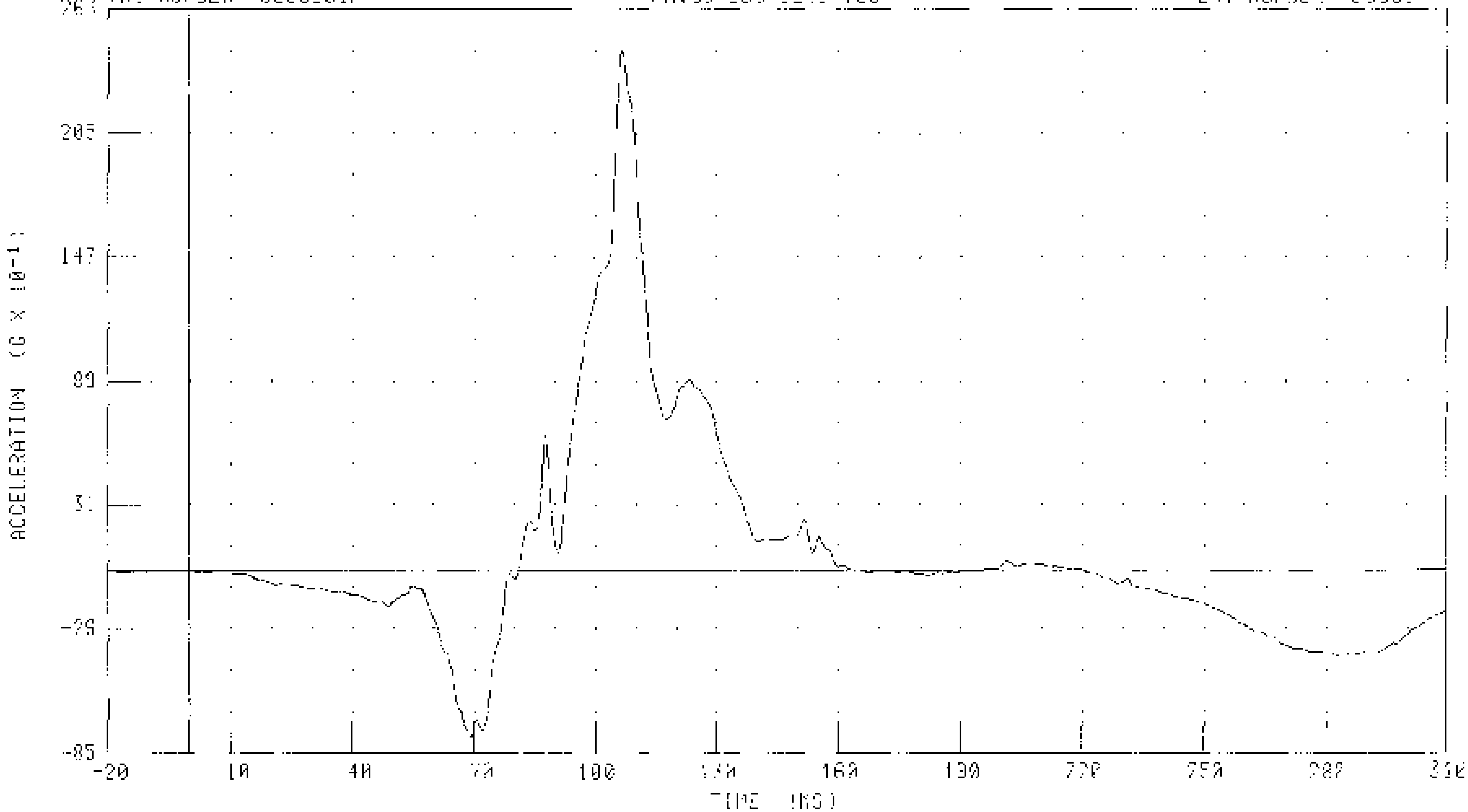
CHANNEL CSTXG2 FILTER CH. CLASS 180 PEAK DATA 2.18 G @ 230.48 MS; -31.42 G @ 104.16 MS


C30203 / 2003 FORD CROWN VICTORIA
RIGHT FRONT PASSENGER CHEST Y-AXIS ACCELERATION
TRC NUMBER S030131F
FMVSS 208 SLED TEST
TEST NUMBER S030131
14
3
-7
-18
-29
-40
-51
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: CSTYC2
FILTER: CH CLASS 180
PEAK DATA 1.41 G @ 110.00 MS; -4.98 G @ 90.16 MS

030203 / 2003 FORD CROWN VICTORIA

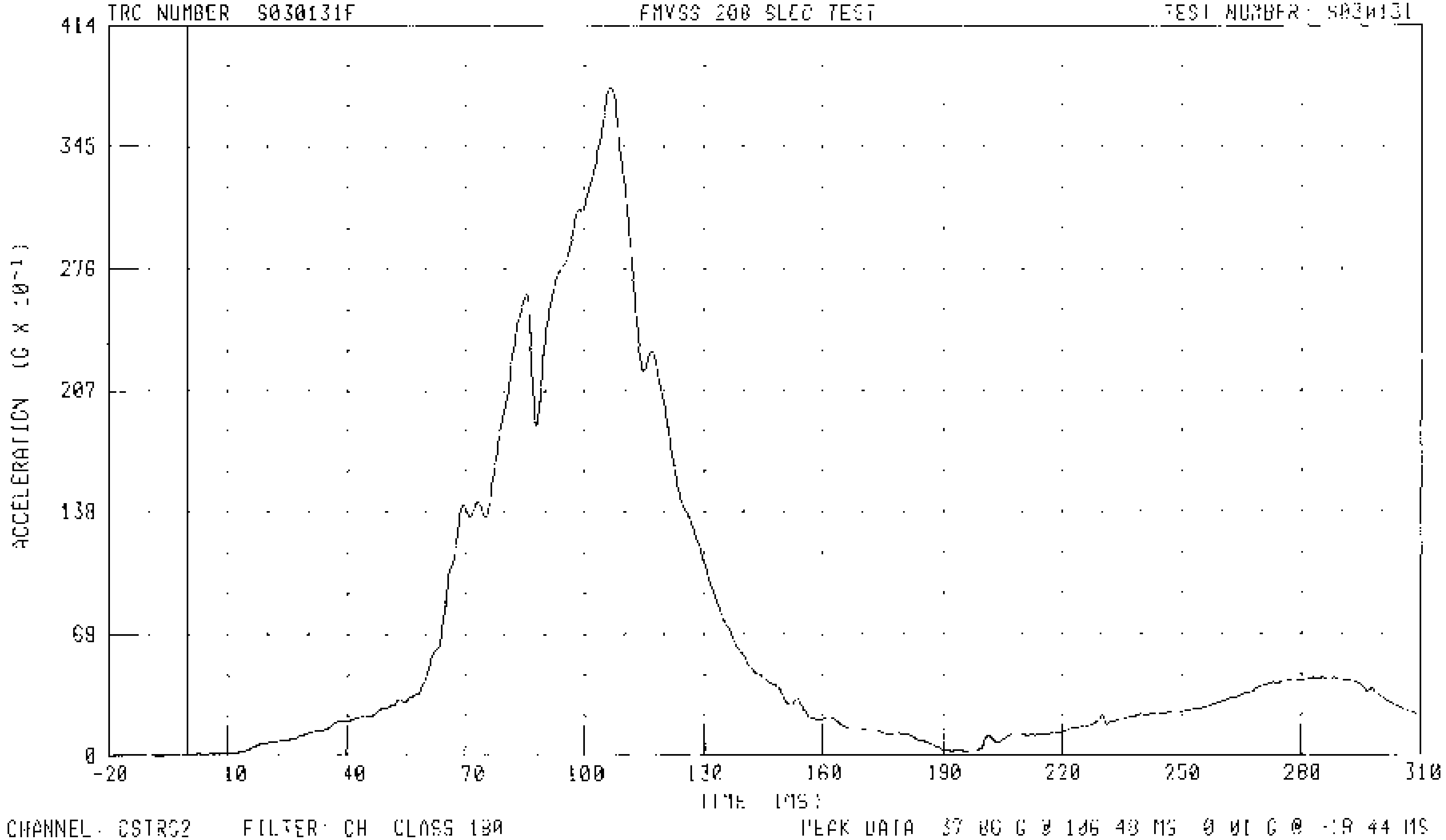
RIGHT FRONT PASSENGER CHEST Z-AXIS ACCELERATION

TRC NUMBER S030131T FMVSS 208 SLED TEST LAB NUMBER S03013

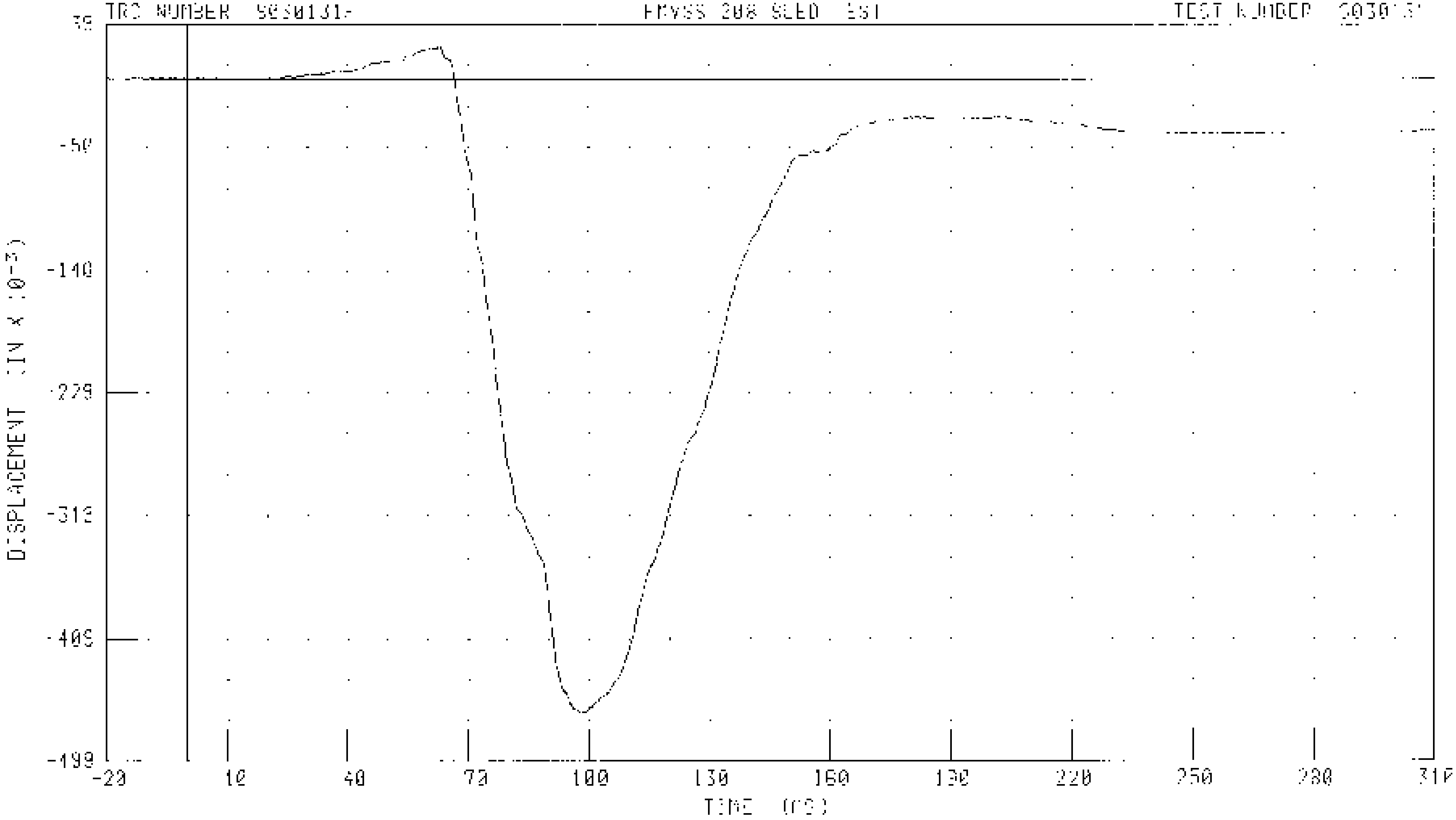


CHANNEL: CST702 FILTER: CH CLASS 180 PEAK DATA 24.39 G @ 106.64 MS, -7.76 G @ 69.20 MS

C30203 / 2003 FORD CROWN VICTORIA
RIGHT FRONT PASSENGER CHEST RESULTANT ACCELERATION



C30203 - 2003 FORD CROWN VICTORIA
RIGHT FRONT PASSENGER CHEST DEFLECTION
FMVSS 208 SLED TEST

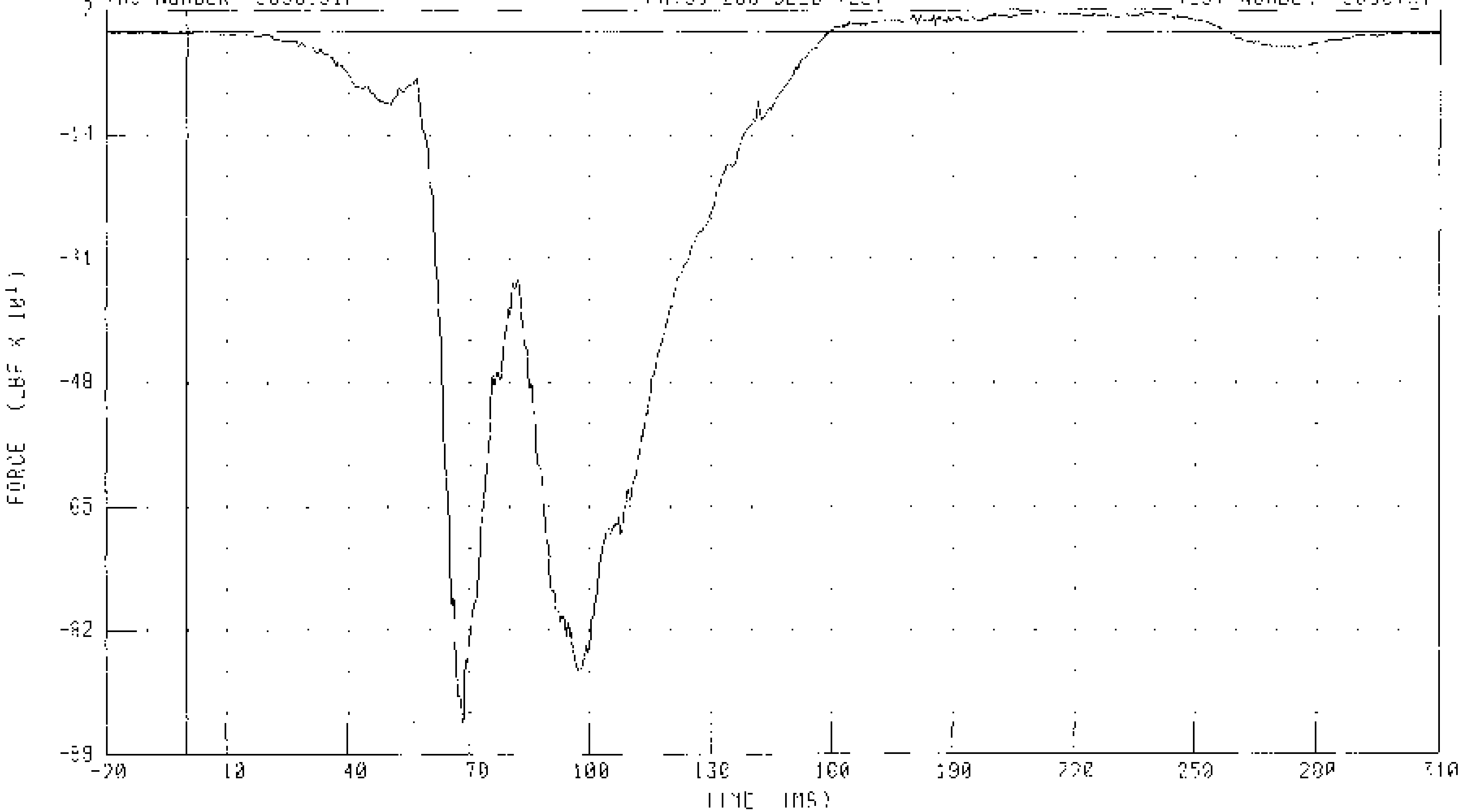


CHANNEL CSTXD2 FILTER CH CLASS 600 PEAK DATA 0.02 IN @ 63.30 MS, -0.46 IN @ 98.00 MS

S30203 : 2003 FORD CROWN VICTORIA
RIGHT FRONT PASSENGER LEFT FEMUR FORCE
FMVSS 208 SLED TEST

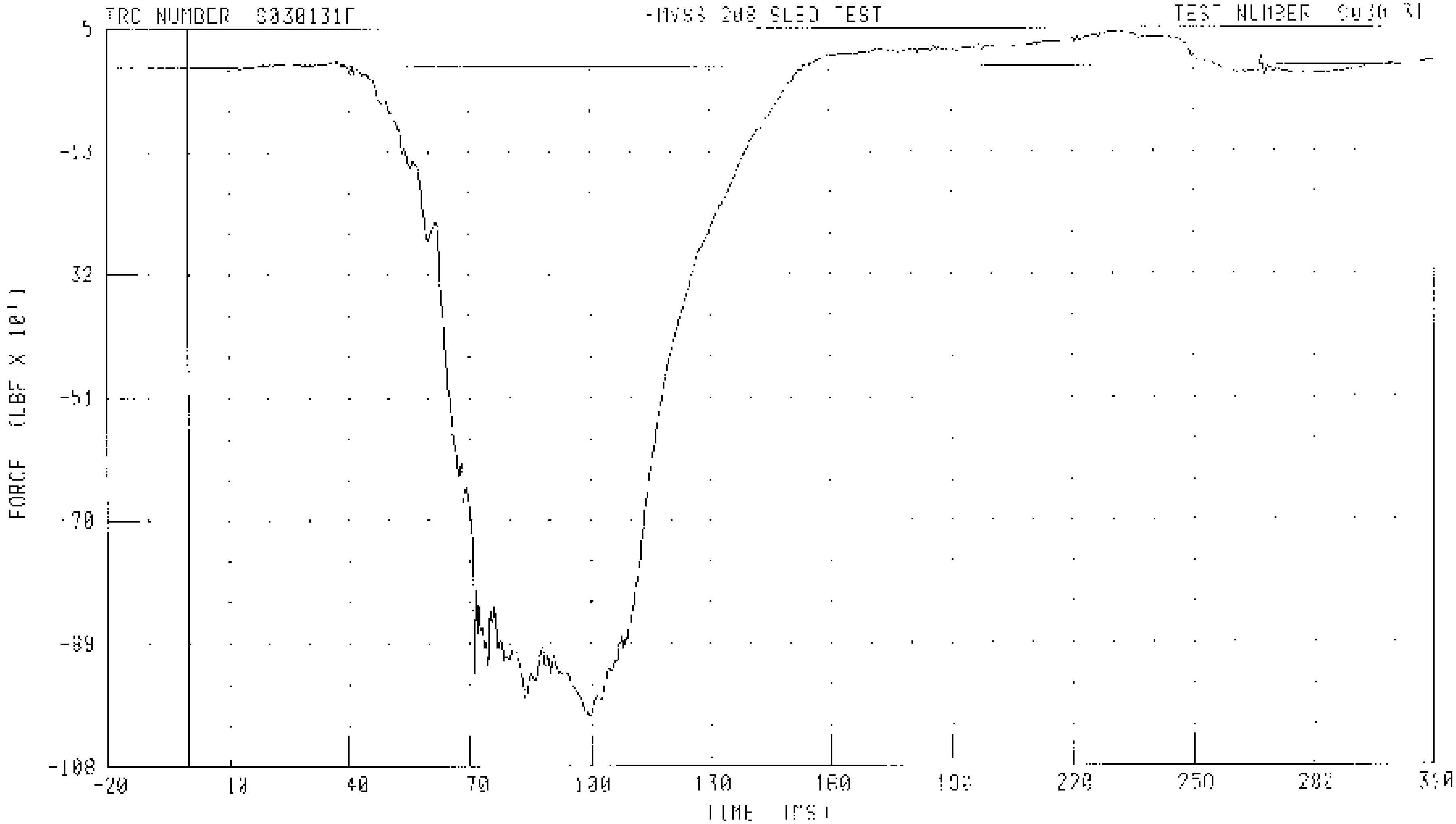
TRC NUMBER S030131F

TEST NUMBER: S030131



CHANNEL LFMZF2   FILTER CH. CLASS 600   PEAK DATA 26.92 LBF @ 280.00 MS, -940.03 LBF @ 68.40 MS

C38203 / 2003 FORD CROWN VICTORIA
RIGHT FRONT PASSENGER RIGHT FEMUR FORCE
FMVSS 208 SLED TEST



CHANNEL: RFM7F2   FILTER: CH. CLASS 600
PEAK DATA 52.85 LBF @ 230.80 MS; -1007.34 LBF @ 99.07 MS

Appendix C

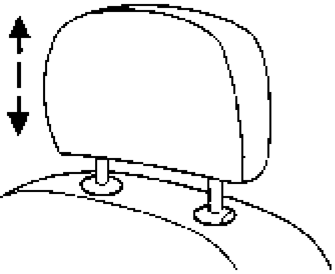
Manufacturer's Vehicle Information

SEATING

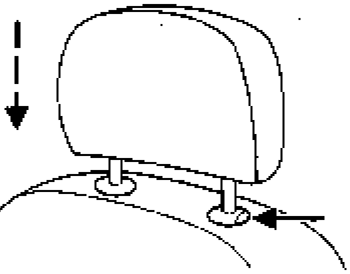
Adjustable head restraints

Your vehicle's seats are equipped with head restraints which are vertically adjustable. The purpose of these head restraints is to help limit head motion in the event of a rear collision. To properly adjust your head restraints, lift the head restraint so that it is located directly behind your head or as close to that position as possible. Refer to the following to raise and lower the head restraints.

The head restraints can be moved up and down.



Push control to lower head restraint.



Adjusting the front manual seat

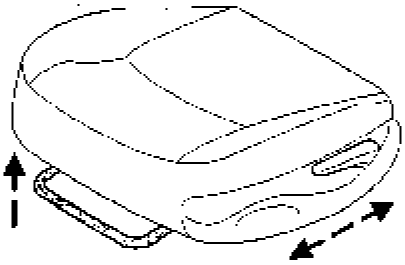
⚠ Never adjust the driver's seat or seatback when the vehicle is moving.

⚠ Do not pile cargo higher than the seatbacks to reduce the risk of [illegible] in a collision or sudden stop.

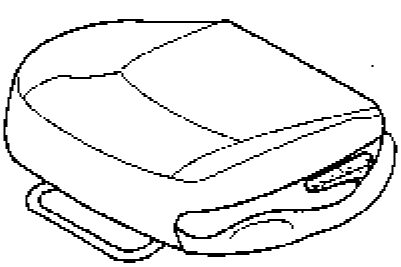
⚠ [illegible]

Reclining the seatback can cause an occupant to slide under the seat's safety belt, resulting in severe personal injuries in the event of a collision.

Lift handle to move seat forward or backward.



Pull lever up to adjust seatback.



Using the manual recline function (if equipped)

Never adjust the driver's seat or seatback when the vehicle is moving.

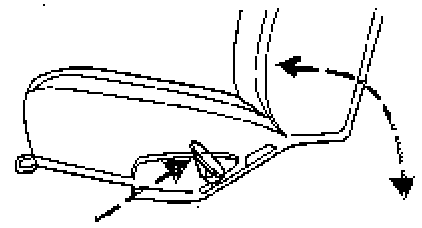
Do not pile cargo higher than the seatbacks to reduce the risk of injury in a collision or sudden stop.

Always drive and ride with your seatback upright and the lap belt snug and low across the hips.

Reclining the seatback can cause an occupant to slide under the seat's safety belt, resulting in severe personal injuries in the event of a collision.

To adjust the front seatback using the manual recliner:

- Lift and hold the handle located on the side of the seat.
- Lean against the seatback to adjust it to your desired position. You can recline the seat back or bring it forward.



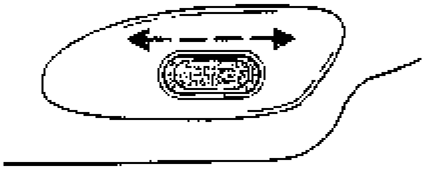
- Release the handle when the desired position has been reached.

Using the power lumbar support (if equipped)

The power lumbar control is located on the outboard side of the seat.

Press one side of the control to adjust firmness.

Press the other side of the control to adjust softness.



Adjusting the power front seats – door mounted controls

The controls for the power seats are located on the inside of each front door.

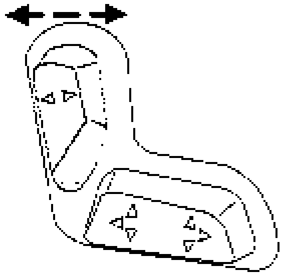
⚠ [illegible]

⚠ [illegible]

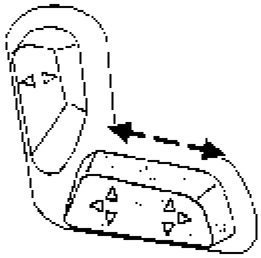
⚠ [illegible]

⚠ [illegible]

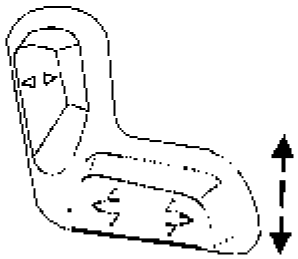
Press the control to recline the seatback forward or backward.



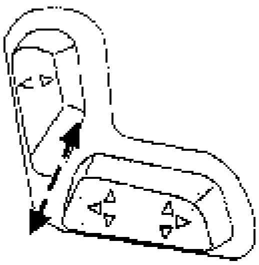
Press to move the seat forward or backward.



Press to move the front portion of the seat cushion up or down.



Press to move the rear portion of the seat cushion up or down.



SAFETY RESTRAINTS

Personal Safety System

The Personal Safety System provides an improved overall level of frontal crash protection to front seat occupants and is designed to help further reduce the risk of air bag-related injuries. The system is able to analyze different occupant conditions and crash severity before activating the appropriate safety devices to help better protect a range of occupants in a variety of frontal crash situations.

Your vehicle's Personal Safety System consists of the following items:

- Driver and passenger dual-stage air bag supplemental restraints
- Driver and front passenger side air bags (if equipped)
- Front safety belts with pretensioners, energy management retractors, and safety belt usage sensors
- Driver's seat position sensor
- Passenger occupant classification sensor
- Front crash severity sensor
- Restraints Control Module (RCM) with impact and safing sensors
- Restraint system warning light and back-up tone
- The electrical wiring for the air bags, crash sensor(s), safety belt pretensioners, front safety belt usage sensors, driver seat position sensor, passenger occupant classification sensor, and indicator lights

How does the personal safety system work?

The Personal safety system can adapt the deployment strategy of your vehicle's safety devices according to crash severity and occupant conditions. A collection of crash and occupant sensors provides information to the Restraints control module (RCM). During a crash, the RCM activates the safety belt pretensioners and/or either one or both stages of the dual-stage air bag supplemental restraints based on crash severity and occupant conditions.

The fact that the pretensioners or air bags did not activate for both front seat occupants in a collision does not mean that something is wrong with the system. Rather, it means the Personal safety system determined the accident conditions (crash severity, belt usage, etc.) were not appropriate to activate these safety devices. Front air bags and pretensioners are designed to activate only in frontal and near-frontal collisions, not rollovers, side-impacts, or rear-impacts unless the collision causes sufficient longitudinal deceleration.

Driver and passenger dual-stage air bag supplemental restraints

The dual-stage air bags offer the capability to tailor the level of air bag inflation energy. A lower, less forceful energy level is provided for more common, moderate-severity impacts. A higher energy level is used for the most severe impacts. Refer to *Air bag supplemental restraints* section in this chapter.

Front crash severity sensor

The front crash severity sensor enhances the ability to detect the severity of an impact. Positioned up front, it provides valuable information early in the crash event on the severity of the impact. This allows your Personal safety system to distinguish between different levels of crash severity and modify the deployment strategy of the dual-stage air bags and safety belt pretensioners.

Driver's seat position sensor

The driver's seat position sensor allows your Personal safety system to tailor the deployment level of the driver dual-stage air bag based on seat position. The system is designed to help protect smaller drivers sitting close to the driver air bag by providing a lower air bag output level.

Passenger occupant classification sensor (OCS)

For air bags to do their job they must inflate with great force, and this force can pose a potentially deadly risk to occupants that are very close to the air bag when it begins to inflate. For some occupants, this occurs because they are initially sitting very close to the air bag. For other occupants, this occurs when the occupant is not properly restrained by seat belts or child safety seats and they move forward during pre-crash braking. The most effective way to reduce the risk of unnecessary injuries is to make sure all occupants are properly restrained. Accident statistics suggest that children are much safer when properly restrained in the rear seating positions than in the front.

Air bags can kill or injure a child in a child seat. **NEVER** place a rear-facing child seat in front of an active air bag. If you must use a forward-facing child seat in the front seat, move the seat all the way back.

Always transport children 12 years old and under in the back seat and always properly use appropriate child restraints.

The passenger occupant classification sensor can automatically turn off the passenger front air bag and side air bag (if equipped). The system is designed to help protect small (child size) occupants from air bag deployments when they are improperly seated or restrained in the front passenger seat contrary to proper child-seating or restraint usage recommendations. Even with this technology, parents are **STRONGLY** encouraged to always properly restrain children in the rear seat. The sensor also turns off the air bag(s) when the passenger seat is empty to prevent unnecessary replacement of the air bag(s) after a collision.

Front safety belt usage sensors

The front safety belt usage sensors detect whether or not the driver and front outboard passenger safety belts are fastened. This information allows your Personal safety system to tailor the air bag deployment and safety belt pretensioner activation depending upon safety belt usage. Refer to *Safety belt* section in this chapter.

Front safety belt pretensioners

The safety belt pretensioners are designed to tighten the safety belts firmly against the occupant's body during a frontal or near-frontal collision. This maximizes the effectiveness of the safety belts and helps properly position the occupant relative to the air bag to improve protection. The safety belt pretensioners can be either activated alone or, if the collision is of sufficient severity, together with the air bags.

Front safety belt energy management retractors

The front safety belt energy management retractors allow webbing to be pulled out of the retractor in a gradual and controlled manner in response to the occupant's forward momentum. This helps reduce the risk of force-related injuries to the occupant's chest by limiting the load on the occupant. Refer to *Energy management feature* section in this chapter.

Determining if the Personal safety system is operational

The Personal safety system uses a warning light in the instrument cluster or a back-up tone to indicate the condition of the system. Refer to the *Warning light* section in the *Instrument cluster* chapter. Routine maintenance of the Personal safety system is not required.

The Restraints control module (RCM) monitors its own internal circuits and the circuits for the air bag supplemental restraints, crash sensor(s), safety belt pretensioners, front safety belt buckle sensors, driver seat position sensor, and passenger occupant classification sensor. In addition, the RCM also monitors the restraints warning light in the instrument cluster. A difficulty with the system is indicated by one or more of the following.

- The warning light will either flash or stay lit.
- The warning light will not illuminate immediately after ignition is turned on.
- A series of five beeps will be heard. The tone pattern will repeat periodically until the problem and warning light are repaired.

If any of these things happen, even intermittently, have the Personal safety system serviced at your dealership or by a qualified technician immediately. Unless serviced, the system may not function properly in the event of a collision.

Safety restraints precautions

⚠ [illegible]

⚠ [illegible]

⚠ Never let a passenger hold a child on his or her lap while the vehicle is moving. The passenger cannot protect the child from injury in a collision.

⚠ All occupants of the vehicle, including the driver, should always properly wear their safety belts, even when an air bag (SRS) is provided.

⚠ It is extremely dangerous to ride in a cargo area, inside or outside of a vehicle. In a collision, people riding in these areas are more likely to be seriously injured or killed. Do not allow people to ride in any area of your vehicle that is not equipped with seats and safety belts. Be sure everyone in your vehicle is in a seat and using a safety belt properly. [illegible]

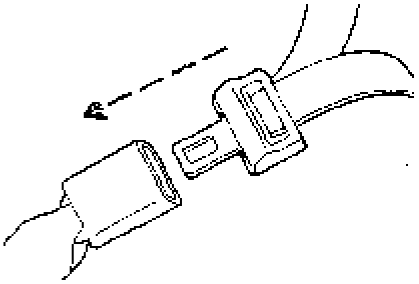
⚠ In a rollover crash, an unbelted person is significantly more likely to die than a person wearing a safety belt.

⚠ Each seating position in your vehicle has a specific safety belt assembly which is made up of one buckle and one tongue that are designed to be used as a pair. [illegible] shoulder belt [illegible] outside shoulder only. Never wear the shoulder belt under the arm. Never swing the safety belt around your neck over the inside shoulder. [illegible]

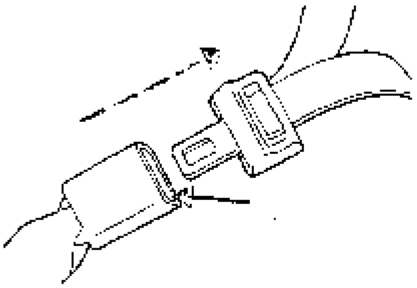
⚠ [illegible]

Combination lap and shoulder belts

1. Insert the belt tongue into the proper buckle (the buckle closest to the direction the tongue is coming from) until you hear a snap and feel it latch. Make sure the tongue is securely fastened in the buckle.



2. To unfasten, push the release button and remove the tongue from the buckle.



Energy management feature

- This vehicle has a seat belt system with an energy management feature at the front outboard seating positions to help further reduce the risk of injury in the event of a head-on collision.
- This seat belt system has a retractor assembly that is designed to pay out webbing in a controlled manner. This feature is designed to help reduce the belt force acting on the occupant's chest.

The front outboard and rear safety restraints in the vehicle are combination lap and shoulder belts. The front outboard passenger and rear seat safety belts have three types of locking modes described below:

Vehicle sensitive mode

This is the normal retractor mode, which allows free shoulder belt length adjustment to your movements and locking in response to vehicle movement. For example, if the driver brakes suddenly or turns a corner sharply, or the vehicle receives an impact of approximately 8 km/h (5 mph) or more, the combination safety belts will lock to help reduce forward movement of the driver and passengers.

Webbing extraction sensitive mode

The webbing extraction sensitive mode stops the belt webbing from retracting if it is pulled out too quickly.

Automatic locking mode

In this mode, the shoulder belt is pre-locked. The belt will still retract to remove any slack in the shoulder belt.

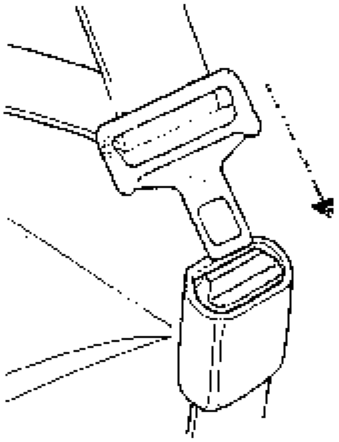
The automatic locking mode is not available on the driver safety belt.

When to use the automatic locking mode

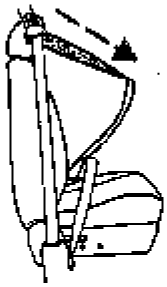
- **Any time** a child safety seat is installed in a passenger front outboard or any rear seating position. Children 12 years old and under should be properly restrained in the rear seat whenever possible. Refer to *Safety Restraints for Children* or *Safety Seats for Children* later in this chapter.

How to use the automatic locking mode

- Buckle the combination lap and shoulder belt.



- Grasp the shoulder portion and pull downward until the entire belt is pulled out.



- Allow the belt to retract. As the belt retracts, you will hear a clicking sound. This indicates the safety belt is now in the automatic locking mode.

How to disengage the automatic locking mode

⚠ Ford Motor Company recommends that all safety belt assemblies and attaching hardware should be inspected by a qualified technician after any collision. Safety belt assemblies not in use during a collision should also be inspected and replaced if either damage or improper operation is noted.

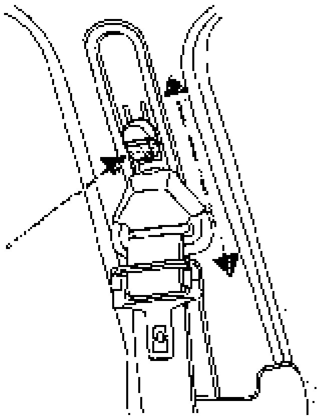
Unbuckle the combination lap/shoulder belt and allow it to retract completely to disengage the automatic locking mode and activate the vehicle sensitive (emergency) locking mode.

⚠ After any vehicle collision, the front outboard passenger and all rear seat belt systems must be checked by a qualified technician to verify that the automatic locking retractor feature for child seats is still functioning properly. In addition, all seat belts should be checked for proper function.

⚠ BELT AND RETRACTOR ASSEMBLY [illegible] the seat belt assembly [illegible] any other seat belt function [illegible] according to the procedures in [illegible]

⚠ Failure to replace the belt and Retractor assembly could increase the risk of injury in collisions.

Front safety belt height adjustment



Your vehicle has safety belt height adjustments for the driver and front outboard passenger. Adjust the height of the shoulder belt so the belt rests across the middle of your shoulder.

To lower the shoulder belt height, push the button and slide the height adjuster down. To raise the height of the shoulder belt, slide the height adjuster up. Pull down on the height adjuster to make sure it is locked in place.

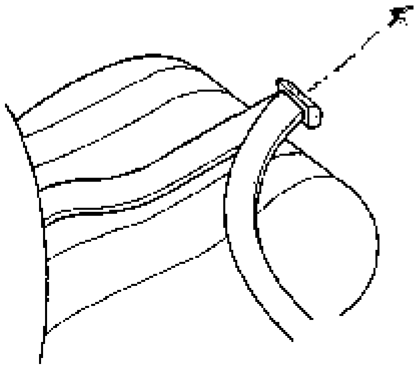
[illegible]

Lap belts

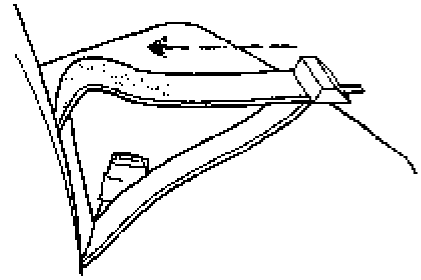
Adjusting the front center seat lap belt

The lap belt should fit snugly and as low as possible around the hips, not across the waist.

The lap belt does not adjust automatically. Insert the tongue into the correct buckle (the buckle closest to the direction the tongue is coming from). To lengthen the belt, turn the tongue at a right angle to the belt and pull across your lap until it reaches the buckle. To tighten the belt, pull the loose end of the belt through the tongue until it fits snugly across the hips.



Shorten and fasten the belt when not in use.



Safety belt warning light and indicator chime ♟

The seat belt warning light illuminates in the instrument cluster and a chime sounds to remind the occupants to fasten their safety belts.

Conditions of operation

If...	Then...
The driver's safety belt is not buckled before the ignition switch is turned to the ON position...	The safety belt warning light illuminates 1-2 minutes and the warning chime sounds 4-8 seconds.
The driver's safety belt is buckled while the indicator light is illuminated and the warning chime is sounding...	The safety belt warning light and warning chime turn off.
The driver's safety belt is buckled before the ignition switch is turned to the ON position...	The safety belt warning light and indicator chime remain off.

BeltMinder

The BeltMinder feature is a supplemental warning to the safety belt warning function. This feature provides additional reminders by intermittently sounding a chime and illuminating the safety belt warning lamp in the instrument cluster when the driver's safety belt is unbuckled.

The BeltMinder feature uses information from the passenger occupant classification sensor to determine if a front seat passenger is present and therefore potentially in need of a warning. To avoid activating the BeltMinder feature for objects placed in the front passenger seat, warnings will only be given to large front seat occupants as determined by the passenger occupant classification sensor.

Both the driver's and passenger's safety belt usages are monitored and either may activate the BeltMinder feature. The warnings are the same for the driver and the front passenger. If the BeltMinder warnings have expired (warnings for approximately 5 minutes) for one occupant (driver or front passenger), the other occupant can still activate the BeltMinder feature.

If...	Then...
The driver's and front passenger's safety belts are buckled before the ignition switch is turned to the ON position or less than 1-2 minutes have elapsed since the ignition switch has been turned ON...	The BeltMinder feature will not activate.
The driver's or front passenger's safety belt is not buckled when the vehicle has reached at least 5 km/h (3 mph) and 1-2 minutes have elapsed since the ignition switch has been turned to ON...	The BeltMinder feature is activated - the safety belt warning light illuminates and the warning chime sounds for 6 seconds every 30 seconds, repeating for approximately 5 minutes or until the safety belts are buckled.
The driver's or front passenger's safety belt becomes unbuckled for approximately 1 minute while the vehicle is traveling at least 5 km/h (3 mph) and more than 1-2 minutes have elapsed since the ignition switch has been turned to ON...	The BeltMinder feature is activated - the safety belt warning light illuminates and the warning chime sounds for 6 seconds every 30 seconds, repeating for approximately 5 minutes or until the safety belts are buckled.

The purpose of the BeltMinder is to remind occasional wearers to wear safety belts all of the time.

The following are reasons most often given for not wearing safety belts: (All statistics based on U.S. data)

Reasons given	**Consider**
"Crashes are rare events"	**36 700 crashes occur every day.** The more we drive, the more we are exposed to "rare" events, even for good drivers. *1 in 4 of us will be seriously injured in a crash during our lifetime.*
"I'm not going far"	**3 of 4** fatal crashes occur within **25** miles of home.
"Belts are uncomfortable"	We design our safety belts to enhance comfort. If you are uncomfortable - try different positions for the safety belt upper anchorage and seatback which should be as upright as possible; this can improve comfort.
"I was in a hurry"	**Prime time for an accident.** BeltMinder reminds us to take a few seconds to buckle up.
"Seat belts don't work"	**Safety belts,** when used properly, **reduce risk of death** to front seat occupants by **45% in cars,** and by **60% in light trucks.**
"Traffic is light"	**Nearly 1 of 2 deaths occur in single-vehicle crashes,** many when no other vehicles are around.
"Belts wrinkle my clothes"	Possibly, but a serious crash can do much more than wrinkle your clothes, particularly if you are unbelted.
"The people I'm with don't wear belts"	Set the example, teen deaths occur 4 times more often in vehicles with TWO or MORE people. Children and younger brothers/sisters imitate behavior they see.
"I have an air bag"	Air bags offer greater protection when used with safety belts. Frontal airbags are not designed to inflate in rear and side crashes or rollovers.
"I'd rather be thrown clear"	Not a good idea. **People** who are **ejected are 40 times more likely to DIE.** Safety belts help prevent ejection, WE CAN'T "PICK OUR CRASH".

! Do not sit on top of a buckled safety belt to avoid the Belt-Minder chime. Sitting on the safety belt will increase the risk of injury in an accident. To disable (one-time) or deactivate the Belt-Minder feature please follow the directions stated below.

One time disable

If at any time the driver/front passenger quickly buckles then unbuckles, the BeltMinder feature for that seating position is disabled for the current ignition cycle. The BeltMinder feature will re-enable during the same ignition cycle if the occupant buckles and remains buckled for approximately 30 seconds. Confirmation is not given for the one time disable.

Deactivating/activating the BeltMinder feature

Read steps 1 - 4 thoroughly before proceeding with the deactivation/activation programming procedure.

The driver and front passenger BeltMinder features can be deactivated/activated by performing the following procedure:

Before following the procedure, make sure that:

- The parking brake is set
- The gearshift is in P (Park) (automatic transmission)
- The ignition switch is in the OFF position
- The driver and front passenger safety belts are unbuckled

! To reduce the risk of injury, do not deactivate/activate the Belt-Minder feature while driving the vehicle.

1. Turn the ignition switch to the RUN (or ON) position. (DO NOT START THE ENGINE)

2. Wait until the safety belt warning light turns off. (Approximately 1 minute)

- Step 3 must be completed within 50 seconds after the safety belt warning light turns off.

3. For the seating position being disabled, buckle then unbuckle the safety belt 9 times, ending in the unbuckled state. (Step 3 must be completed within 50 seconds after the safety belt warning light turns off.)

- After step 3, the restraint system warning light will be turned on for three seconds.

4. Within 10 seconds of the light turning on, buckle then unbuckle the safety belt.

- This will disable the BeltMinder feature for that seating position if it is currently enabled. As confirmation, the restraint system warning light will flash 4 times per second for 3 seconds.
- This will enable the BeltMinder feature for that seating position if it is currently disabled. As confirmation, the restraint system warning light will flash 4 times per second for 3 seconds, followed by 3 seconds with the light off, then followed by the restraint system warning light flashing 4 times per second for 3 seconds again.

Safety belt extension assembly

If the safety belt is too short when fully extended, there is a 20 cm (8 inch) safety belt extension assembly that can be added (part number 611C22). This assembly can be obtained from your dealer at no cost.

Use only extensions manufactured by the same supplier as the safety belt. Manufacturer identification is located at the end of the webbing on the label. Also, use the safety belt extension only if the safety belt is too short for you when fully extended.

⚠ Do not use extensions to change the fit of the shoulder belt across the torso.

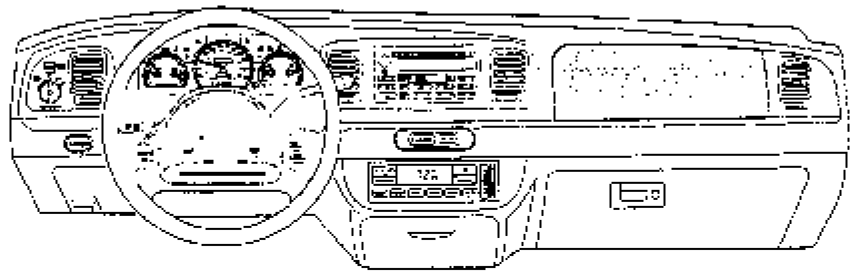
Safety belt maintenance

Inspect the safety belt systems periodically to make sure they work properly and are not damaged. Inspect the safety belts to make sure there are no nicks, tears or cuts. Replace if necessary. All safety belt assemblies, including retractors, buckles, front seat belt buckle assemblies, buckle support assemblies (slide bar-if equipped), shoulder belt height adjusters (if equipped), shoulder belt guide on seatback (if equipped), child safety seat LATCH and tether anchors, and attaching hardware, should be inspected after a collision. Ford Motor Company recommends that all safety belt assemblies used in vehicles involved in a collision be replaced. However, if the collision was minor and a qualified technician finds that the belts do not show damage and continue to operate properly, they do not need to be replaced. Safety belt assemblies not in use during a collision should also be inspected and replaced if either damage or improper operation is noted.

⚠ Failure to inspect and if necessary replace the safety belt assembly under the above conditions could result in severe personal injuries in the event of a collision.

Refer to *Cleaning and maintaining the safety belts* in the *Cleaning* chapter.

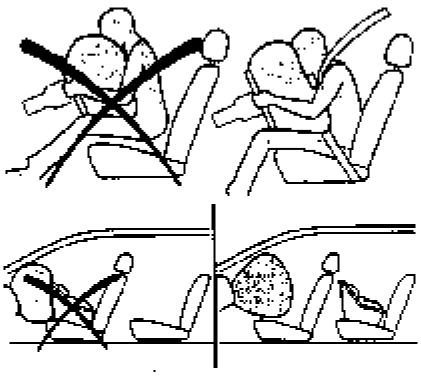
AIR BAG SUPPLEMENTAL RESTRAINT SYSTEM (SRS)



Your vehicle is equipped with a crash sensing and diagnostic module which records information about the air bag and sensor systems. In the event of a collision this module may save information related to the collision including information about the air bag system and impact severity. This information will assist Ford Motor Company in servicing the vehicle and in helping to better understand real world collisions and further improve the safety of future vehicles.

Important SRS precautions

The SRS is designed to work with the safety belt to help protect the driver and right front passenger from certain upper body injuries. Air bags DO NOT inflate slowly; there is a risk of injury from a deploying air bag.



All occupants of the vehicle, including the driver, should always properly wear their safety belts, even when [illegible] provided.

Always transport children 12 years old and under in the back seat and always properly use appropriate child restraints.

National Highway Traffic Safety Administration (NHTSA) recommends a minimum distance of at least 25 cm (10 inches) between an occupant's chest and the driver air bag module.

Never place your arm over the air bag module as a deploying air bag can result in serious arm fractures or other injuries.

To properly position yourself away from the air bag:

- Move your seat to the rear as far as you can while still reaching the pedals comfortably.
- Recline the seat slightly one or two degrees from the upright position.

[illegible]

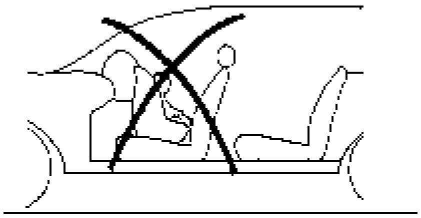
[illegible]

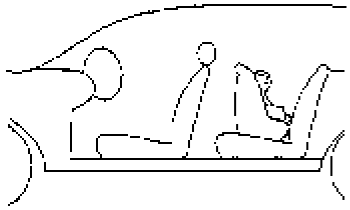
[illegible]

[illegible]

Children and air bags

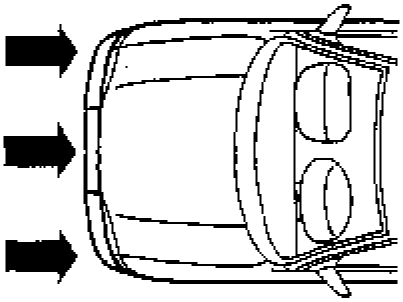
Children must always be properly restrained. Accident statistics suggest that children are safer when properly restrained in the rear seating positions than in the front seating position. Failure to follow these instructions may increase the risk of injury in a collision.





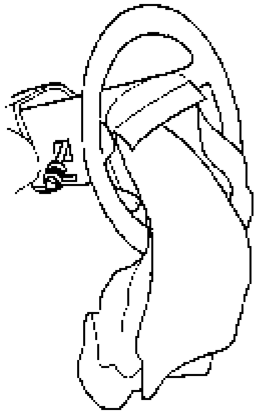
⚠ Air bags can kill or injure a child in a child seat. **NEVER** place a rear-facing child seat in front of an active air bag. If you must use a forward-facing child seat in the front seat, move the seat all the way back.

How does the air bag supplemental restraint system work?



The air bag SRS is designed to activate when the vehicle sustains longitudinal deceleration sufficient to cause the sensors to close an electrical circuit that initiates air bag inflation.

The fact that the air bags did not inflate in a collision does not mean that something is wrong with the system. Rather, it means the forces were not of the type sufficient to cause activation. Driver and passenger airbags are designed to inflate in frontal and near-frontal collisions, not rollover, side-impact, or rear-impacts unless the collision causes sufficient longitudinal deceleration.



The air bags inflate and deflate rapidly upon activation. After air bag deployment, it is normal to notice a smoke-like, powdery residue or smell the burnt propellant. This may consist of cornstarch, talcum powder (to lubricate the bag) or sodium compounds (e.g., baking soda) that result from the combustion process that inflates the air bag. Small amounts of sodium hydroxide may be present which may irritate the skin and eyes, but none of the residue is toxic.

While the system is designed to help reduce serious injuries, contact with a deploying air bag may also cause abrasions, swelling or temporary hearing loss. Because air bags must inflate rapidly and with considerable force, there is the risk of death or serious injuries such as fractures, facial and eye injuries or internal injuries, particularly to occupants who are not properly restrained or are otherwise out of position at the time of air bag deployment. Thus, it is extremely important that occupants be properly restrained as far away from the air bag module as possible while maintaining vehicle control.

The SRS consists of the following items:

- Driver and passenger air bag modules (which include the inflators and air bags)
- Driver and passenger side air bags (if equipped)
- One or more impact and safing sensors
- A readiness light and tone
- A diagnostic module
- The electrical wiring which connects the components

The diagnostic module monitors its own internal circuits as well as the supplemental air bag electrical system warning (including the impact sensors), the system wiring, the air bag system readiness light, the air bag back up power and the air bag ignitors.

⚠ Several air bag system components get hot after inflation. Do not touch them after inflation.

⚠ If the air bag has deployed, **the air bag will not function again and must be replaced immediately.** If the air bag is not replaced, the unrepaired area will increase the risk of injury in a collision.

⚠ If the safety belt pretensioners deploy in an accident, they will not function again (belt will not extract or retract) and must be replaced immediately. Failure to replace the retractor assemblies will increase the risk of injury.

Determining if the system is operational

The SRS uses a readiness light in the instrument cluster or a tone to indicate the condition of the system. Refer to *Air bag readiness* section in the *Instrument cluster* chapter. Routine maintenance of the air bag is not required.

A difficulty with the system is indicated by one or more of the following:

AIR BAG

- The readiness light will either flash or stay lit.
- The readiness light will not illuminate immediately after ignition is turned on.
- A series of five beeps will be heard. The tone pattern will repeat periodically until the problem and/or light are repaired.

If any of these things happen, even intermittently, have the SRS serviced at your dealership or by a qualified technician immediately. Unless serviced, the system may not function properly in the event of a collision.

Side air bag system (if equipped)

⚠ Do not place objects or mount equipment on or near the air bag cover on the side of the seatbacks (of the front seats) or in front seat areas that may come in contact with a deploying air bag. Failure to follow these instructions may increase the risk of personal injury in the event of a collision.

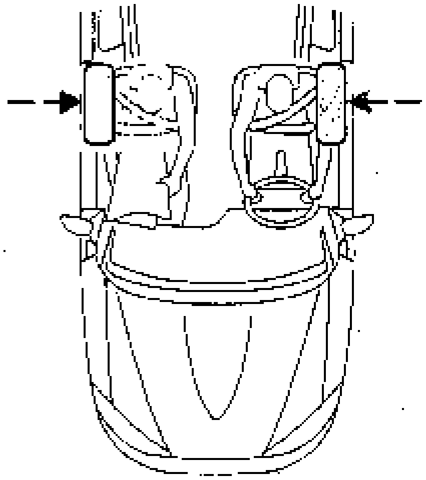
⚠ Do not use accessory seat covers. The use of accessory seat covers may prevent the deployment of the side air bags and increase the risk of injury in an accident.

⚠ Do not lean your head on the door. The side air bag could injure you as it deploys from the side of the seatback.

⚠ Do not attempt to service, repair, or modify the air bag supplemental restraint systems or its fuses or the seat cover on a seat containing an air bag. See your Ford or Lincoln Mercury dealer.

⚠ All occupants of the vehicle including the driver should always wear their safety belts even when an air bag (SRS) is provided.

How does the side air bag system work?



The design and development of the side airbag system included recommended testing procedures that were developed by a group of automotive safety experts known as the Side Airbag Technical Working Group. These recommended testing procedures help reduce the risk of injuries related to the deployment of side airbags.

The side air bag system consists of the following:

- An inflatable nylon bag (air bag) with a gas generator concealed behind the outboard bolster of the driver and front passenger seatbacks.
- A special seat cover designed to allow airbag deployment.
- The same warning light, electronic control and diagnostic unit as used for the front air bags.
- Two crash sensors located under the outboard side of the front seats, attached to the floor.

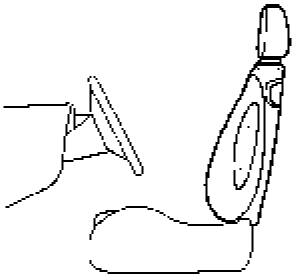
Side air bags, in combination with seat belts, can help reduce the risk of severe injuries in the event of a significant side impact collision.

The side air bags are fitted on the outboard side of the seatbacks of the front seats. In certain lateral collisions, the air bag on the side affected by the collision will be inflated. The air bag was designed to inflate between the door panel and occupant to further enhance the protection provided occupants in side impact collisions.

The air bag SRS is designed to activate when the vehicle sustains lateral deceleration sufficient to cause the sensors to close an electrical circuit that initiates air bag inflation.

The fact that the air bags did not inflate in a collision does not mean that something is wrong with the system. Rather, it means the forces were not of the type sufficient to cause activation. Side air bags are designed to inflate in side-impact collisions, not roll-over, rear-impact, frontal or near-frontal collisions, unless the collision causes sufficient lateral deceleration.

⚠ Several air bag system components get hot after inflation. Do not touch them after inflation. [illegible]



⚠ [illegible] side air bag has deployed, [illegible] the seat [illegible] serviced [illegible] in accordance with the vehicle service manual. [illegible]

Determining if the system is operational

The SRS uses a readiness light in the instrument cluster or a tone to indicate the condition of the system. Refer to the *Air bag readiness* section in the *Instrument cluster* chapter. Routine maintenance of the side air bag is not required.

A difficulty with the system is indicated by one or more of the following:

- The readiness light (same light as for front air bag system) will either flash or stay lit.
- The readiness light will not illuminate immediately after ignition is turned on.
- A series of five beeps will be heard. The tone pattern will repeat periodically until the problem and light are repaired.

If any of these things happen, even intermittently, have the SRS serviced at your dealership or by a qualified technician immediately. Unless serviced, the system may not function properly in the event of a collision.

Disposal of air bags and air bag equipped vehicles (including pretensioners)

For disposal of air bags or air bag equipped vehicles, see your local dealership or qualified technician. Air bags MUST BE disposed of by qualified personnel.

SAFETY RESTRAINTS FOR CHILDREN

See the following sections for directions on how to properly use safety restraints for children. Also see *Air bag supplemental restraint system (SRS)* in this chapter for special instructions about using air bags.

Important child restraint precautions

You are required by law to use safety restraints for children in the U.S. and Canada. If small children ride in your vehicle (generally children who are four years old or younger and who weigh 18 kg [40 lbs] or less), you must put them in safety seats made especially for children. Check your local and state or provincial laws for specific requirements regarding the safety of children in your vehicle.

[illegible]

Always follow the instructions and warnings that come with any infant or child restraint you might use.

When possible, always place children under age 12 in the rear seat of your vehicle. Accident statistics suggest that children are safer when properly restrained in the rear seating positions than in the front seating positions.

Children and safety belts

If the child is the proper size, restrain the child in a safety seat.

Children who are too large for child safety seats (as specified by your child safety seat manufacturer) should always wear safety belts.

Follow all the important safety restraint and air bag precautions that apply to adult passengers in your vehicle.

If the shoulder belt portion of a combination lap and shoulder belt can be positioned so it does not cross or rest in front of the child's face or neck, the child should wear the lap and shoulder belt. Moving the child closer to the center of the vehicle may help provide a good shoulder belt fit.

⚠ Do not leave children, unreliable adults, or pets unattended in your vehicle.

Child booster seats

Children outgrow a typical convertible or toddler seat when they weigh 40 pounds and are around 4 years of age. Although the lap/shoulder belt will provide some protection, these children are still too small for lap/shoulder belts to fit properly, which could increase the risk of serious injury.

To improve the fit of both the lap and shoulder belt on children who have outgrown child safety seats, Ford Motor Company recommends use of a belt-positioning booster.

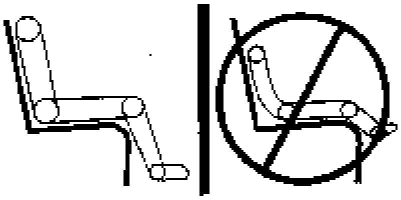
Booster seats position a child so that safety belts fit better. They lift the child up so that the lap belt rests low across the hips and the knees bend comfortably. Booster seats also make the shoulder belt fit better and more comfortably for growing children.

When children should use booster seats

Children need to use booster seats from the time they outgrow the toddler seat until they are big enough for the vehicle seat and lap/shoulder belt to fit properly. Generally this is when they weigh about 80 lbs (about 8 to 12 years old).

Booster seats should be used until you can answer YES to ALL of these questions:

- Can the child sit all the way back against the vehicle seat back with knees bent comfortably at the edge of the seat without slouching?



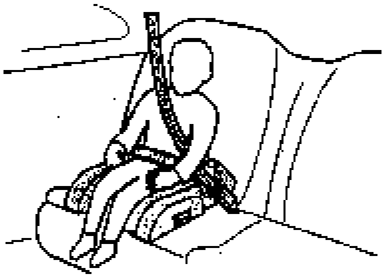
- Does the lap belt rest low across the hips?
- Is the shoulder belt centered on the shoulder and chest?
- Can the child stay seated like this for the whole trip?

Types of booster seats

There are two types of belt-positioning booster seats:

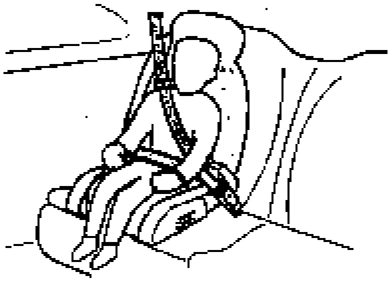
- Those that are backless.

  If your backless booster seat has a removable shield, remove the shield and use the lap/shoulder belt. If a seating position has a low seat back and no head restraint, a backless booster seat may place your child's head (top of ear level) above the top of the seat. In this case, move the backless booster to another seating position with a higher seat back and lap/shoulder belts.



- Those with a high back.

  If, with a backless booster seat, you cannot find a seating position that adequately supports your child's head, a high back booster seat would be a better choice.



Both can be used in any vehicle in a seating position equipped with lap/shoulder belts if your child is over 40 lbs.

The shoulder belt should cross the chest, resting snugly on the center of the shoulder. The lap belt should rest low and snug across the hips, never up high across the stomach.

If the booster seat slides on the vehicle seat, placing a rubberized mesh sold as shelf or carpet liner under the booster seat may improve this condition.

The importance of shoulder belts

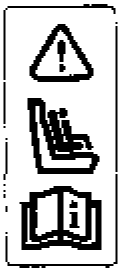
Using a booster without a shoulder belt increases the risk of a child's head hitting a hard surface in a collision. For this reason, you should never use a booster seat with a lap belt only. It is best to use a booster seat with lap/shoulder belts in the back seat- the safest place for children to ride.

⚠ Follow all instructions provided by the manufacturer of the booster seat.

⚠ Never put the shoulder belt under a child's arm or behind the back because it eliminates the protection for the upper part of the body and may increase the risk of injury or death in a collision.

⚠ Never use pillows, books or towels to boost a child. They can slide around and increase the likelihood of injury or death in a collision.

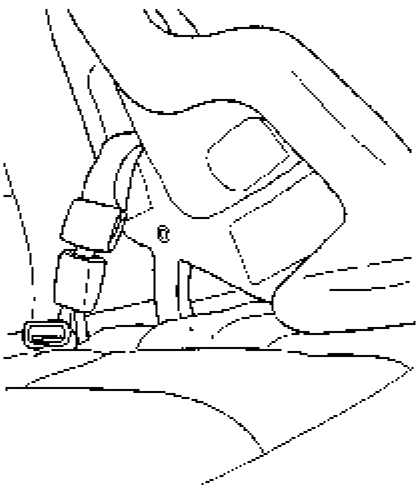
SAFETY SEATS FOR CHILDREN



Child and infant or child safety seats

Use a safety seat that is recommended for the size and weight of the child. Carefully follow all of the manufacturer's instructions with the safety seat you put in your vehicle. If you do not install and use the safety seat properly, the child may be injured in a sudden stop or collision.

When installing a child safety seat:



- Review and follow the information presented in the *Air bag supplemental restraint system* (SRS) section in this chapter.
- Use the correct safety belt buckle for that seating position (the buckle closest to the direction the tongue is coming from).
- Insert the belt tongue into the proper buckle until you hear a snap and feel it latch. Make sure the tongue is securely fastened in the buckle.
- Keep the buckle release button pointing up and away from the safety seat, with the tongue between the child seat and the release button, to prevent accidental unbuckling.
- Place seat back in upright position.
- Put the safety belt in the automatic locking mode. Refer to *Automatic locking mode* (passenger side front and outboard rear seating positions) (if equipped) section in this chapter.

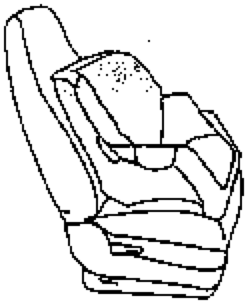
Ford recommends the use of a child safety seat having a top tether strap. Install the child safety seat in a seating position with a tether anchor. For more information on top tether straps, refer to *Attaching child safety seats with tether straps.* in this chapter.

⚠ Carefully follow all of the manufacturers instructions included with the safety seat you put in your vehicle. If you do not install and use the safety seat properly, the child may be injured in a sudden stop or collision.

Installing child safety seats with combination lap and shoulder belts

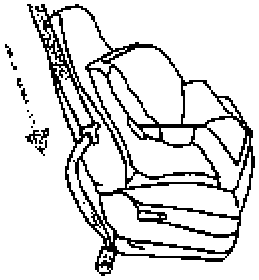
⚠ Air bags can kill or injure a child in a child seat. **NEVER** place a rear-facing child seat in front of an active air bag. If you must use a forward-facing child seat in the front seat, move the seat all the way back.

1. Position the child safety seat in a seat with a combination lap and shoulder belt.

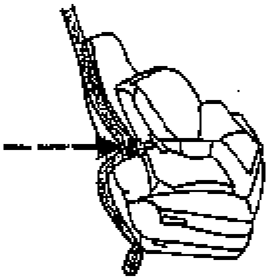


⚠ Children 12 and under should be properly restrained in the rear seat whenever possible.

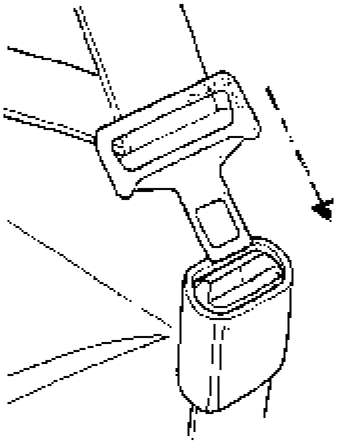
2. Pull down on the shoulder belt and then grasp the shoulder belt and lap belt together.



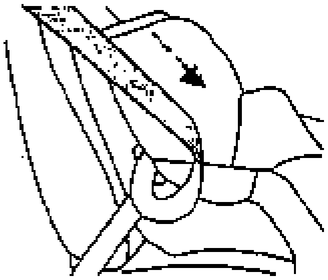
3. While holding the shoulder and lap belt portions together, route the tongue through the child seat according to the child seat manufacturer's instructions. Be sure the belt webbing is not twisted.



4. Insert the belt tongue into the proper buckle (the buckle closest to the direction the tongue is coming from) for that seating position until you hear a snap and feel the latch engage. Make sure the tongue is latched securely by pulling on it.

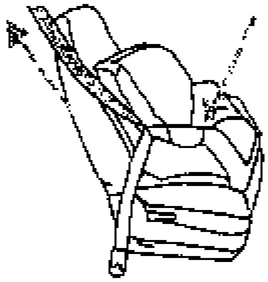


5. To put the retractor in the automatic locking mode, grasp the shoulder portion of the belt and pull downward until all of the belt is pulled out and a click is heard.



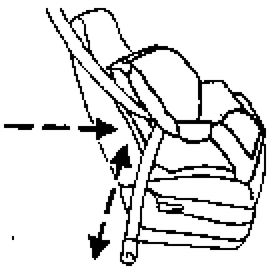
6. Allow the belt to retract. The belt will click as it retracts to indicate it is in the automatic locking mode.

7. Pull the lap belt portion across the child seat toward the buckle and pull up on the shoulder belt while pushing down with your knee on the child seat.



8. Allow the safety belt to retract to remove any slack in the belt.

9. Before placing the child in the seat, forcibly move the seat forward and back to make sure the seat is securely held in place. To check this, grab the seat at the belt path and attempt to move it side to side and forward. There should be no more than one inch of movement for proper installation.



10. Try to pull the belt out of the retractor to make sure the retractor is in the automatic locking mode (you should not be able to pull more belt out). If the retractor is not locked, unbuckle the belt and repeat steps two through nine.

Check to make sure the child seat is properly secured before each use.

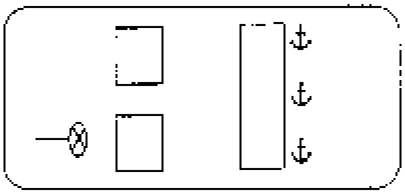
Attaching child safety seats with tether straps

Most new forward-facing child safety seats include a tether strap which goes over the back of the seat and hooks to an anchoring point. Tether straps are available as an accessory for many older safety seats. Contact the manufacturer of your child seat for information about ordering a tether strap.

The rear seats of your vehicle are equipped with built-in tether strap anchors located behind the seats as described below.

The tether anchors in your vehicle are located under a cover marked with the tether anchor symbol (shown with title).

The tether strap anchors in your vehicle are in the following positions (shown from top view):

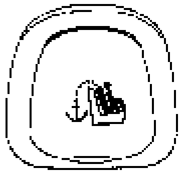


⚠ Attach the tether strap only to the appropriate tether anchor as shown. The tether strap may not work properly if attached somewhere other than the correct tether anchor.

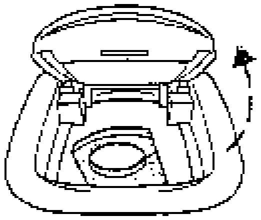
1. Position the child safety seat on the seat cushion.
2. Route the child safety seat tether strap over the back of the seat.

For vehicles with adjustable head restraints, route the tether strap under the head restraint and between the head restraint posts, otherwise route the tether strap over the top of the seatback.

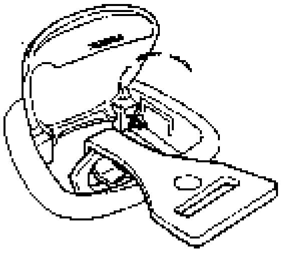
3. Locate the correct anchor for the selected seating position.



4. Open the tether anchor cover.



5. Clip the tether strap to the anchor as shown.



⚠ If the tether strap is clipped incorrectly, the child safety seat may not be retained properly in the event of a collision.

6. Refer to the *Installing child safety seats with combination lap and shoulder belts* section of this chapter for further instructions to secure the child safety seat.

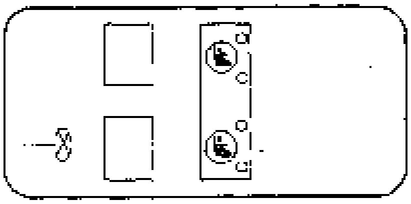
7. Tighten the child safety seat tether strap according to the manufacturer's instructions.

⚠ If the safety seat is not anchored properly, the risk of a child being injured in a collision greatly increases.

Attaching safety seats with LATCH (Lower Anchors and Tethers for Children) attachments

Some child safety seats have two rigid or webbing mounted attachments that connect to two anchors at certain seating positions in your vehicle. This type of child seat eliminates the need to use seat belts to attach the child seat. For forward-facing child seats, the tether strap must also be attached to the proper tether anchor. See *Attaching safety seats with tether straps* in this chapter.

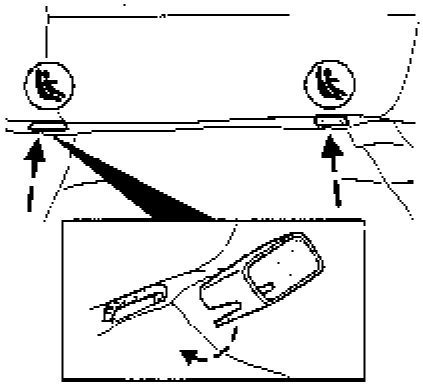
Your vehicle has LATCH anchors for child seat installation at the seating positions marked with the child seat symbol.



The anchors on both sides of the center of the rear seat are provided for child seats at the outboard seats, and are further apart than the pairs of lower anchors for child seat installation at other seats. DO NOT install child seats with LATCH attachments (rigid or mounted on belt webbing) to the lower anchors at the center rear seat. If you install a child seat at the center rear position, use the vehicle belt and the top tether anchor.

⚠ Never attach two LATCH child safety seats to the same anchor. In a crash, one anchor may not be strong enough to hold two child safety seat attachments and may break, causing serious injury or death.

The lower anchors for child seat installation are located at the rear section of the rear seat between the cushion and seat back. The LATCH anchors are below the locator symbols on the seat back.



Follow the child seat manufacturer's instructions to properly install a child seat with LATCH attachments. Two plastic LATCH guides can be obtained at no charge from any Ford or Lincoln-Mercury dealer. They snap onto the LATCH lower anchors in the seat to help attach a child seat with rigid attachments. The guides hold the seat trim away to expose the anchor and make it easier to attach some child seats.

If you install a child seat with rigid LATCH attachments, do not tighten the tether strap enough to lift the child seat off the vehicle seat cushion when the child is seated in it. Keep the tether strap just snug without lifting the front of the child seat. Keeping the child seat just touching the vehicle seat gives the best protection in a severe crash.

Each time you use the safety seat, check that the seat is properly attached to the lower anchors and tether anchor. Try to tilt the child seat from side to side. Also try to tug the seat forward. Check to see if the anchors hold the seat in place.

Appendix D

Miscellaneous Test Information

Channel Report

01/31/2003 9:15:26 AM

Name of Test 030131 **System** K3600 **Name of DAU** DAU0

Chan.#	Sensor #	Mnemonic	Description	Dir.	Range	Pol.	Cal. Date/Status		Group	Mfg.	Model
0000	EVENT	EVENT	T-O		10.24 V	+	10/15/2002	OK	SLED	TRC	Event
0001	C15351	SLDXG	Sled X - axis acceleration	Rear	199.8828811 g	-	01/09/2003	OK	SLED	Endevco	7231C
0002	C15519	SLDXGR	Sled X - axis acceleration	Rear	200.2777288 g	-	01/09/2003	OK	SLED	Endevco	7231C
0003	SLDXV	SLDXV	Measured Velocity		164.6408129 km/h	-	04/08/2002	OK	SLED	TRC	SLDXV
0004	SLDXGT	SLDXGT	Sled X - axis acceleration for	Rear	195.5131266 g	-	01/09/2003	OK	SLED	Endevco	7231C
0005	AD4H9	HEDXG1	Head X - axis acceleration	Rear	398.4931975 g	-	11/14/2002	OK	230n	Endevco	7231C
0006	AD4J7	HEDYG1	Head Y - axis acceleration	Left	399.0335905 g	-	11/14/2002	OK	230n	Endevco	7231C
0007	AD4J8	HEDZG1	Head Z - axis acceleration	Up	399.4632212 g	-	11/14/2002	OK	230n	Endevco	7231C
0008	1716-0235-FX	NEKXF1	Neck X - axis Shear Force	Hd	8903.774810 N	-	11/14/2002	OK	230n	Denton	1716
0009	1716-0235-FY	NEKYF1	Neck Y - axis Shear Force	Hd	8890.769842 N	+	11/14/2002	OK	230n	Denton	1716
0010	1716-0235-FZ	NEKZF1	Neck Z - axis Shear Force	Hd	13345.70000 N	+	11/14/2002	OK	230n	Denton	1716
0011	1716-0235-MX	NEKXM1	Neck Moment about X - axis	Rt Ear	282.6733514 N·m	-	11/14/2002	OK	230n	Denton	1716
0012	1716-0235-MY	NEKYM1	Neck Moment about Y - axis	Chn	282.6477513 N·m	+	11/14/2002	OK	230n	Denton	1716
0013	1716-0235-MZ	NEKZM1	Neck Moment about Z - axis	Chn	282.8104526 N·m	+	11/14/2002	OK	230n	Denton	1716
0014	ACTR4	CSTXG1	Chest X - axis acceleration	Fwd	398.6297103 g	+	11/14/2002	OK	230n	Endevco	7231C
0015	ACTT4	CSTYG1	Chest Y - axis acceleration	Left	400.5852299 g	-	11/14/2002	OK	230n	Endevco	7231C
0016	ACTW0	CSTZG1	Chest Z - axis acceleration	Down	399.4382899 g	+	11/14/2002	OK	230n	Endevco	7231C
0017	85427-1	CSTXD1	Chest Deflection	Strnm	100.2712415 mm	+	11/18/2002	OK	230n	Servo	14CB1-2847
0018	2430T-984	LFMZF1	Left Femur Force	Knee	13357.47070 N	+	11/14/2002	OK	230n	GSE	2430T
0019	2430T-985	RFMZF1	Right Femur Force	Knee	13354.84855 N	+	11/14/2002	OK	230n	GSE	2430T
0020	APDJ3	HEDXG2	Head X - axis acceleration	Rwd	400.3471760 g	-	12/26/2002	OK	314n	Endevco	7231C
0021	AGHP8	HEDYG2	Head Y - axis acceleration	Left	399.2576303 g	-	12/26/2002	OK	314n	Endevco	7231C
0022	APD60	HEDZG2	Head Z - axis acceleration	Up	401.2146145 g	-	12/26/2002	OK	314n	Endevco	7231C
0023	1716A-1221-FX	NEKXF2	Neck X - axis Shear Force	Hd	8895.062154 N	-	12/26/2002	OK	314n	Denton	1716A
0024	1716A-1221-FY	NEKYF2	Neck Y - axis Shear Force	Hd	8889.300790 N	+	12/26/2002	OK	314n	Denton	1716A
0025	1716A-1221-FZ	NEKZF2	Neck Z - axis Shear Force	Hd	13350.07202 N	+	12/26/2002	OK	314n	Denton	1716A
0026	1716A-1221-MX	NEKXM2	Neck Moment about X - axis	Rt Ear	282.4298268 N·m	-	12/26/2002	OK	314n	Denton	1716A
0027	1716A-1221-MY	NEKYM2	Neck Moment about Y - axis	Chn	282.6254107 N·m	+	12/26/2002	OK	314n	Denton	1716A
0028	1716A-1221-MZ	NEKZM2	Neck Moment about Z - axis	Chn	282.7948080 N·m	+	12/26/2002	OK	314n	Denton	1716A
0029	C13010	CSTXG2	Chest X - axis acceleration	Fwd	398.4466805 g	+	12/26/2002	OK	314n	Endevco	7231C

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0030	C14563	CSTYG2	Chest Y - axis acceleration	Left	399.4289414 g	-	12/26/2002	OK	314n	Endevco	7231C
0031	AD343	CSTZG2	Chest Z - axis acceleration	Down	398.8470826 g	+	12/26/2002	OK	314n	Endevco	7231C
0032	14CB1-2847-041	CSTXD2	Chest Deflection	Strnm	100.5192841 mm	+	01/06/2003	OK	314n	Servo	14CB1-2847
0033	2430T-962	LFMZF2	Left Femur Force	Knee	13347.40580 N	+	12/26/2002	OK	314n	GSE	2430T
0034	2430T-982	RFMZF2	Right Femur Force	Knee	13345.59042 N	+	12/26/2002	OK	314n	GSE	2430T
0035	P24716	LBXG	Left Body @ Rear Seat	Fwd	199.6381558 g	+	11/20/2002	OK	-1	Endevco	7264C-2K-2-180
0036	P24592	RBXG	Right Body @ Rear Seat	Fwd	199.7129126 g	+	11/20/2002	OK	-1	Endevco	7264C-2K-2-180
0037	P24543	TEXG	Top of Engine Block	Fwd	199.9000499 g	+	11/20/2002	OK	-1	Endevco	7264C-2K-2-180
0038	P24389	RAXG	Rear Axle	Fwd	199.9531359 g	+	11/21/2002	OK	-1	Endevco	7264C-2K-2-180
0039	P24717	LFXG	Left Vehicle Frame	Fwd	200.2436558 g	+	11/20/2002	OK	-1	Endevco	7264C-2K-2-180
0040	P25257	RFXG	Right Vehicle Frame	Fwd	199.9269797 g	+	11/21/2002	OK	-1	Endevco	7264C-2K-2-180

Digital and System Channel Report

Name of Test 030131 **System** K3600 **Name of DAU** DAU0 **description**

enabled	**Channel**	**Short Name**	**Type**	**Data File**	**Module Type**
Yes	0500	Dig0	dig0	DAT00500	KM3650 Sequencer

bit position	**bit selector**	**short name**	**long name**	**description**	
MSB = bit 15	1	Backup	Pull Apart Switch		
bit 14	1	ABEVT1	AIRBAG EVENT DP	20 mS	1
bit 13	1	ABEVT2	AIRBAG EVENT DS	30 mS	2
bit 12	1	ABEVT3	AIRBAG EVENT PP	20 mS	3
bit 11	1	ABEVT4	AIRBAG EVENT PS	30 mS	4
bit 10	0				
bit 09	0				
bit 08	0				
bit 07	0				
bit 06	0				
bit 05	0				
bit 04	0				
bit 03	0				
bit 02	0				
bit 01	0				
LSB = bit 00	0				

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